SD11
A574
#198

USDA United States Department of Agriculture

Forest Service

North Central Research Station

General Technical Report **NC - 198**

Practical Social Assessments for National Forest Planning

Pamela Jakes, Thomas Fish, Deborah Carr, and Dale Blahna

ROCKY MOUNTAIN RESEARCH STATION LIBRARY
FORT COLLINS CENTER
240 W PROSPECT RD
FORT COLLINS, CO 80526-2098

North Central Research Station
Forest Service—U.S. Department of Agriculture
1992 Folwell Avenue
St. Paul, Minnesota 55108
Manuscript approved for publication June 24, 1998
1998

Contents

Page

Introduction 1
Why a Social Assessment for the Chequamegon-Nicolet National Forest? 2
Clarification of Terms 3
What Kind of Assessment is This? 4
What Does the Term "Social" Mean in Social Assessment? 4
What are Categorical and Functional Groups? 5
Methods 6
Describing the Functional Communities of the Wisconsin National Forests—Using Key Informant Interviews 6
Describing the People of Northern Wisconsin—Using Secondary Data 8
Identifying Chequamegon-Nicolet Users—Using National Forest Permits 9
Findings 9
The People of Northern Wisconsin—Examples of Using Census Data to Characterize Residents of Counties 9
Functional Communities of the Wisconsin National Forests 23
Value and Use of Social Assessments 32
County Census Data 33
Community Data 33
Future Research and Applications 34
Literature Cited 35
Appendix A—Questionnaire Used to Interview Key Respondents 37
Appendix B—Locating Census Data on the Internet 39

Practical Social Assessments for National Forest Planning

Pamela Jakes, Thomas Fish, Deborah Carr, and Dale Blahna

INTRODUCTION

National forest managers around the U.S. are currently involved in the second round of planning under the Resources Planning Act (RPA) of 1974 (as amended by the National Forest Management Act of 1976). One of many decisions they must make before actually initiating forest planning or plan revision is whether the process would benefit from a social assessment. A social assessment is a "broad level or programmatic data collection and analysis process used to generate information about the social environment" (USDA Forest Service 1995, p. 2.2). The first round of national forest planning was criticized for not providing decisionmakers with adequate information about the social environment on which to base planning decisions:

> "We concluded that the planning process was designed for an analytical approach to resource decision making; it lacked any means of incorporating sociopolitical issues into the decision making process... We apparently provided the decision makers with reams of FORPLAN results and resource data but with very little information on the demographic, culture, or lifestyle of constituents..." (USDA Forest Service 1990, p. 14).

Some forest managers see the social assessment as an instrument for gathering the social information lacking in earlier forest plans. Social assessments are not decision documents, but are descriptions of past, present, and potential social conditions. Managers can use the information contained in social assessments to identify preliminary planning issues, potential stakeholders, communities of interest, and social and political hot spots (USDA Forest Service 1995). Social assessments can also provide valuable baseline data to use in the environmental impact statements required by the National Environmental Policy Act of 1969 (NEPA) for forest plans and forest plan revisions.

However, social assessments can be costly and time-consuming. National forests seldom have the necessary trained staff to undertake such an assignment. Social scientists at the North Central Research Station were challenged by staff of the Chequamegon-Nicolet National Forests in Wisconsin to produce a social assessment with a limited budget and within a short timeframe—a practical approach to social assessments. The process and some of the findings from the social assessment for the Chequamegon-Nicolet National Forests are presented here. Recommendations about social assessments based on the Chequamegon-Nicolet experience are also

Pamela Jakes, Project Leader, Social and Economic Dimensions of Ecosystem Management unit, North Central Research Station, St. Paul, Minnesota.

Thomas Fish, Graduate Research Assistant, University of Minnesota, working with the Social and Economic Dimensions of Ecosystem Management unit, North Central Research Station, St. Paul, Minnesota.

Deborah Carr, Research Social Scientist, Atmospheric-Ecosystem Interactions and the Social Aspects of Managing Ecosystems unit, North Central Research Station, East Lansing, Michigan.

Dale Blahna, Associate Professor, Utah State University, Ogden, Utah.

offered. The authors hope that others interested in a quick overview of the social conditions in which their agencies work and the people with whom they work will be able to apply the process to their situation.

Why a Social Assessment for the Chequamegon-Nicolet National Forests?

The Chequamegon-Nicolet National Forests are part of a green belt of publicly owned land in northern Wisconsin that provides a wealth of benefits to the residents of Wisconsin and the Upper Midwest (fig. 1).[1] Interest in understanding the interdependence between people and forests has been building on the Wisconsin national forests just as it has on other national forests across the country. In addition to the call for more social information in general critiques of the first round of forest planning, the Chequamegon-Nicolet received further direction about social assessments and analysis from a panel of experts in June 1993. The Wisconsin national forests brought together this panel to identify methods and principles for evaluating the potential social and economic impacts of implementing ecosystem management. The Chequamegon and Nicolet National Forests' Socioeconomic Roundtable, as it was called, was initiated in response to appeals of the Chequamegon and Nicolet forest plans (completed in the late 1980's) (Jakes and Harms 1995). The Socioeconomic Roundtable recommended that the Forests take steps to place equal emphasis on social, economic, biological, and physical impacts when formulating and evaluating resource management decisions.

[1] *In the fall of 1996 the Chequamegon National Forest and the Nicolet National Forest had one administrative staff and were being managed as one forest even though they technically remained two forests.*

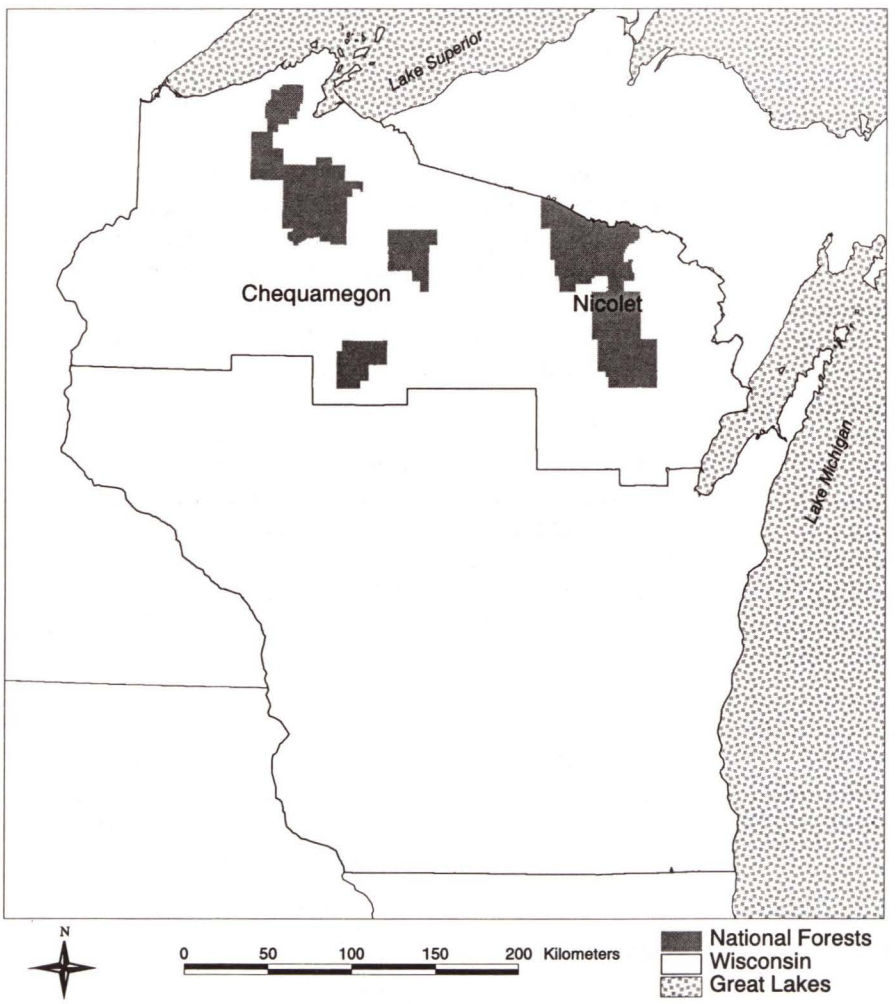


Figure 1.—*Location of Wisconsin's Chequamegon and Nicolet National Forests.*

The Chequamegon-Nicolet are among the first forests in the Eastern Region of the Forest Service to initiate forest plan revision. For this reason, staff in the regional office and on other national forests are monitoring how the Chequamegon-Nicolet handle a myriad of planning challenges, including gathering, organizing, and interpreting social information. In July 1996, several social scientists from the Forest Service's North Central Research Station and their cooperators met in Park Falls, Wisconsin, at the Chequamegon-Nicolet headquarters to discuss issues related to forest plan revision. At that meeting, the Wisconsin national forests requested help in producing a social assessment that would provide the social context for plan revision[2].

It's difficult to find examples of forest-level social assessments in the standard literature, although they undoubtedly can be found on the shelves and in the file cabinets in national forest offices throughout the U.S. One example is the assessment prepared for the Kootenai National Forest (Impact Assessment, Incorporated, 1995). The objective of this report was to describe public perceptions of forest management issues, and the social, cultural, and economic factors that influence public perceptions. In a similar document looking at Ravalli County, Montana, and prepared for the Northern Region of the Forest Service (Bitterroot Social Research Institute 1994), the authors argue that:

> "attempts to manage ecosystems must carefully consider the human dimension; without this factor, there would be no reason to manage anything. The best method to gather and assess information concerning the human dimension of ecosystems is a process called social assessment" (p. 1).

The task of producing a useful social assessment becomes even more challenging as the Forest Service increases its emphasis on ecosystems in forest planning and decisionmaking. Ecosystems do not conform to existing agency or political boundaries, and the scale of a social assessment must be flexible enough to address site-specific management issues as well as broad-scale eco-regional plans. As a result, the focus of social assessments has shifted from a national forest or individual county to multi-county and even multi-State regions. Examples of regional social assessments include the Forest Ecosystem Management Team's assessment (FEMAT 1993), the Southern Appalachian Assessment (Southern Appalachian Man and the Biosphere Cooperative 1996), the integrated scientific assessment for the Interior Columbia Basin (Quigley *et al.* 1996), and the Sierra-Nevada Ecosystem Project (Kusel 1996, Doak and Kusel 1996).

These were expensive and time-consuming assessments that cannot be replicated by each national forest. Additionally, each study used different social assessment methods, data, and units of analysis, depending on the project goals and mandate. They, along with countless studies in the research literature, do little for on-the-ground social assessment beyond illustrating the large number and variety of ways of conducting social assessments. One consistent conclusion of these studies is that the social *community* (as opposed to a politically defined area like a county, town, or State) is the most important unit of analysis for conducting social assessments (Machlis and Force 1988, Kusel 1996, Quigley *et al.* 1996). Unfortunately, there is little guidance for doing practical social assessments that meet the needs of forest planning as well as the variable scale and long-term adaptive management needs of ecosystem management.

This report presents a method for conducting social assessments that are both practical and conceptually relevant. We use a definition of community that focuses on the functional relationship between a national forest and local residents, and present a qualitative approach for both assessment and the application of results to forest planning. We conclude the report by discussing implications for both national forest planning and for project- and regional-level ecosystem management decisionmaking.

CLARIFICATION OF TERMS

Because the language used in social analysis can be unfamiliar to most or confusing to many, the following section clarifies how terms are used in this document.

[2] *For a debate about the need for social assessment in forest plan revision, see Stewart* et al. *(1998).*

What Kind of Assessment is This?

The literature is full of research related to social impact analysis, social impact assessment, social assessment, socioeconomic impact analysis, and so on. Does it matter which term is used? It does in the Forest Service. As defined earlier, a social assessment is a "broad level or programmatic data collection and analysis process used to generate information about the social environment" (USDA Forest Service 1995, p. 2.2). Social assessments are sometimes confused with social impact analyses (SIA). While the social assessment is broad, general, and descriptive, an SIA is a very specific process institutionalized by the Forest Service to meet NEPA requirements. The SIA looks at the specific potential impacts of a proposed management project or alternative. Social impact analyses often make use of the information contained in social assessments, particularly in setting baseline conditions (for meaningful and consistent units of analysis), but they are very different documents.

What Does the Term "Social" Mean in Social Assessment?

Although in the Forest Service the document of interest here is called a *social* assessment, in the literature several terms are used to describe the type of assessment being conducted—social, economic, social and economic, socioeconomic. It's important to be clear on what the word "social" encompasses. The model incorporated in this assessment recognizes social impacts in four dimensions—the economic dimension, political dimension, community dimension, and cultural dimension (fig. 2)[3]. Perhaps the easiest way to explain the four dimensions is by sharing part of an interview one of the authors conducted with the mayor of Park Falls, Wisconsin (fig. 3).

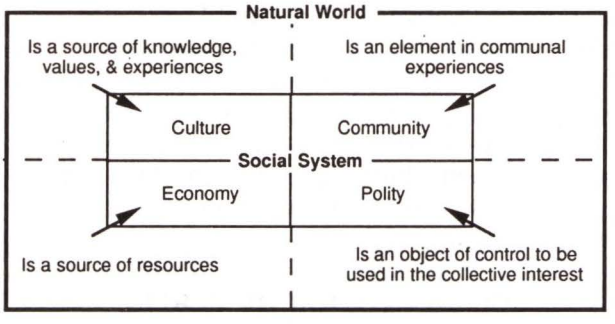


Figure 2.—*Four dimensions of the social system, and the role of the natural world in each dimension (Jakes 1996).*

In Park Falls, Wisconsin, the mayor of the town expressed concern that, due to the consolidation of the two Forests, the Chequamegon National Forest headquarters would be closed, and the headquarters would move to a more central location. One of the concerns he raised about this possible move was that the Forest Service would no longer be purchasing the equipment, supplies, and services necessary to operate the headquarters. Forest Service personnel would be reassigned. Families would have to move to be closer to the employee's new assignment. The mayor obviously had concerns about the potential *economic* impacts of closing the headquarters. However, this wasn't the mayor's only concern. He also talked about the importance of seeing the forest supervisor and other Forest Service employees at civic events. Several years ago a Forest Service employee coached the girls' basketball team to a State championship. More recently, a Forest Service employee helped raise funds for a hockey arena. Having Forest Service employees live and work in Park Falls helped increase the solidarity of the residents—having the headquarters and its employees in Park Falls has significance for the town as a *community*. Park Falls residents love to fish, hunt, and snowmobile on national forest land. The mayor and other interviewees see the forest supervisor's office as a symbol of the community's ties to the forests of northern Wisconsin. Viewed from this perspective, the headquarters has *cultural* significance. Finally, residents of Park Falls like to participate in national forest planning and management by sharing their views with Forest Service employees (whether informally when they meet on the street or formally at Forest meetings and open houses). If the forest supervisor's office moved, it would be more difficult for Park Falls residents to participate in these activities. Viewed from this perspective, the

[3] *Discussion based on unpublished study plan: Lewis, Bernard. 1994. Problem analysis: the social dimension of ecosystem management. 149 p. Available from Lewis.*

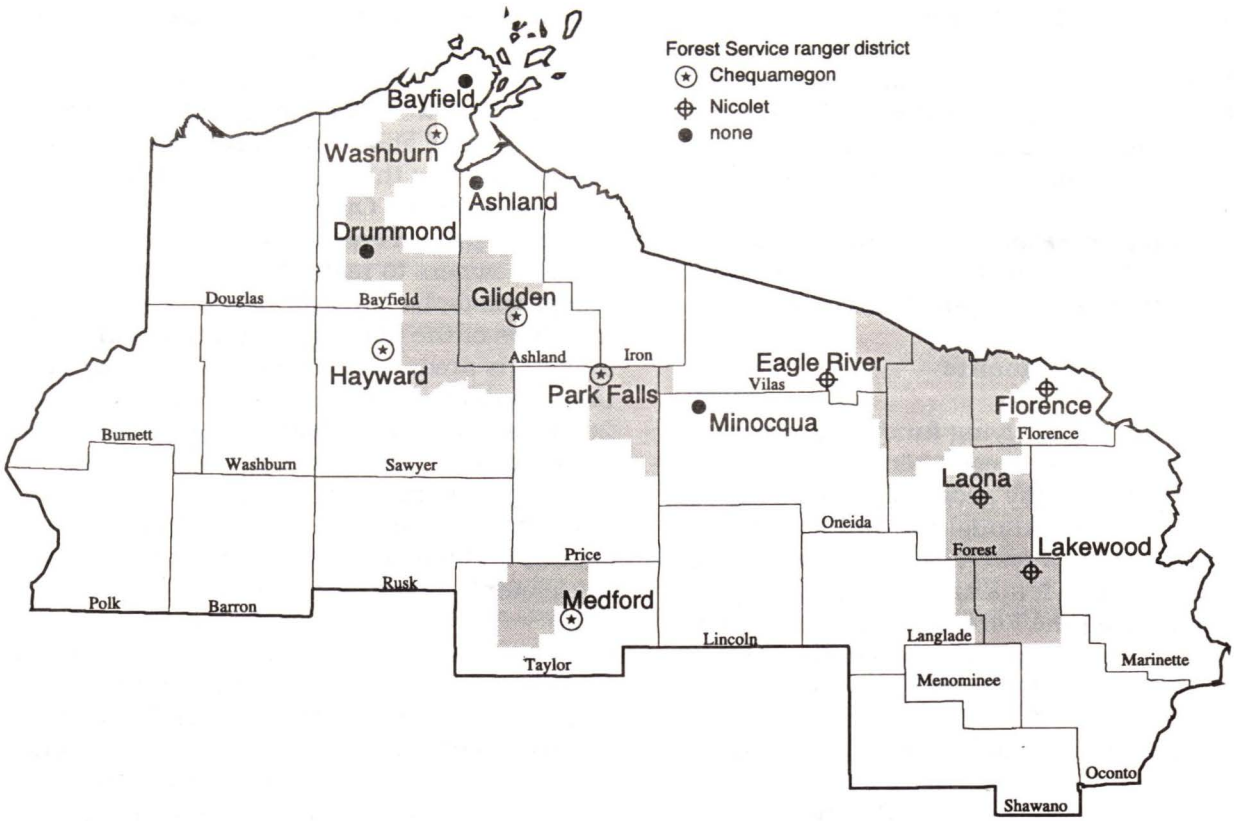


Figure 3.—*Northern Wisconsin counties and towns discussed in the Wisconsin national forests' social assessment.*

potential closing of the supervisor's office could have *political* significance for the residents of Park Falls.

This framework of four dimensions of a social system can be useful in conducting a social assessment. The framework helps ensure that we describe conditions and involve groups who interact with the national forest in each of the four dimensions. It also helps us lay the groundwork for measuring and describing possible impacts of management in all four dimensions.

What are Categorical and Functional Groups?

The social assessment of the Chequamegon-Nicolet National Forests focuses on the people living on or near the Wisconsin national forests. We organized people into groups using two difference perspectives. First, we looked at *categorical groups*—groups that have similar statistical or definitional characteristics (Flynn 1985). For example, teenagers is a categorical group defined by the age of the person. In our categorical analysis, we used U.S. Bureau of the Census data to describe people who live in the counties of northern Wisconsin. The analysis of categorical groups is based on means, averages, and other statistics that provide a benchmark for further analyses. Categorical analyses are the foundation of social assessments.

We also analyzed the people living on or near the Wisconsin national forests as *functional groups*. Here we were interested in people's behavior and their interactions with each other (Flynn 1985). Functional groups are not created by the analyst (such as the teenager example used before) but by social (economic, political, community, and cultural) conditions. In this case we interviewed residents living on or near the Wisconsin national forests and asked them to define groups based on how people relate to and use forests and other natural resources. We combined the information on functional groups with information obtained during interviews of people living in a geographic area to develop functional communities.

METHODS

The Chequamegon-Nicolet social assessment uses three different approaches to obtain data necessary to describe the people and current social conditions on or near the Forests.

Describing The Functional Communities of the Wisconsin National Forests—Using Key Informant Interviews

Selecting Key Informants

The objective of identifying functional communities for the Chequamegon-Nicolet National Forests was to identify geographic areas in which the residents thought of and used the Forests in similar ways. To do this, we needed to talk to area residents about the way they viewed and used the Forests, and their impressions, opinions, and perceptions of the ways their neighbors related to the Forests.

We contacted the five district rangers on the Chequamegon-Nicolet and asked them to identify residents in their district who would be able to discuss the relationship between the local residents and the national forests. We were interested in talking to Forest Service employees as well as those outside the agency. These people would serve as key informants, and would be interviewed to obtain their insights about the ways in which people view and use forest lands.

In research and management, key informants serve two primary purposes: to provide information about activities or events that the analyst (land manager or researcher) has not witnessed, and to help explain events that the analyst has witnessed (Patton 1980). Key informants are especially useful in situations where the analyst does not or cannot have direct access to a group or activity. People selected to be key informants must be knowledgeable and articulate—people whose insights can help the analyst understand what's happening.

We tried to interview at least four people in each ranger district—generally two Forest Service employees and two residents not employed by the Forest Service. Although we were interested in the diverse views of residents in and around the ranger district, we did not try to obtain representatives of all interests. Rather, we looked for people who were knowledgeable about the range of demands being placed on the Chequamegon-Nicolet National Forests. Our interviewees ranged from mayors and county board members to sawmill owners to resort owners to dental receptionists, from the forest supervisor to members of the planning team to technicians in various areas. Respondents had lived in their functional communities for an average of 26 years. Length of residence statistics for key informants are found in table 1. Table 2 shows the distribution of non-Forest Service key informants in different employment categories and length of residence statistics for these employment categories.

We were unsuccessful in involving members of the Wisconsin American Indian bands in our interviews. Further efforts are underway to assess American Indian issues about national forest management and use. American Indians make up more than 3 percent of the population in northern Wisconsin; most live in Menominee County where they account for nearly 90 percent of that county's population (U.S. Bureau of the Census [n.d.]a).

Table 1.—*Length of time key informants have lived in Wisconsin and in their functional communities*

Key informant group	Average number of years lived in Wisconsin	Average number of years lived in the functional community
Forest Service key informants		
Average	34	20
Median	40	18
Range	5 - 52	5 - 47
Non-Forest Service key informants		
Average	39	33
Median	45	24
Range	0[1] - 70	1.5 - 72

[1] *There is a "0" value here because one of the functional communities extended into Michigan, and one of our respondents in that community lived in Michigan.*

Table 2.—*Distribution of key informants among occupation categories, average length of time living in Wisconsin and living in the functional community, non-Forest Service informants*

Occupation/employment	Number of informants [1]	Average number of years lived in Wisconsin	Average number of years lived in the functional community [2]
Educator/writer/extension	5	46	28
Timber industry	5	35	49
Civic leader	5	50	37
Retiree	4	63	35
Small business owner/operator	4	43	32
Tourism/recreation	3	42	35
Other	3	22	10

[1] *The total in this column adds to more than the total number of non-Forest Service informants (23) because some people have been double counted—particularly people who are civic leaders (members of county board, mayors, etc.) but also have a job (such as the mayor of Park Falls who also works at the local mill).*

[2] *The average length of time in the community is more than the average length of time in Wisconsin because one community extends outside the State of Wisconsin, and there is one person who lives in the community but resides in Michigan.*

Key Informant Interviews

Two of the authors conducted all the interviews. We allowed ourselves 4 weeks for interviews during September and early October 1996. Because of the short timeframe, we were unable to interview everyone we had initially selected—some of the people we contacted were simply not available during this time, many Forest staff were on fire duty, Forest Service staff and residents were trying to finish outdoor jobs before the onset of winter, and hunting season limited our access to people from all backgrounds.[4]

Interviews were conducted at times and places selected by the informants—we met at mills, retail stores, campgrounds, and resorts, but most often we met at the local ranger station. We met during the day, over lunch, and after business hours. Many of our informants were pleasantly surprised by our willingness to come to them, rather than asking them to come to us.

[4] *For this social assessment, we were operating on an extremely tight timeframe. In cases where time is not an overriding issue, we've been able to conduct interviews with all the key informants initially identified.*

The goals of the interview were to have the respondent (1) identify geographic areas where residents use and interact with the national forests and other forest lands in similar ways, and (2) describe or characterize the interactions between people and the natural resources in this area, and how these interactions might differ from those in other areas. To achieve the first goal, we placed a piece of mylar over a map of Wisconsin and asked respondents to consider the region of Wisconsin with which they are most familiar and to draw circles or other geometric shapes around areas where people use and relate to the forests and natural resources in similar ways. These shapes were our initial attempts at identifying functional communities.

We then interviewed key informants using the questionnaire in Appendix A to guide our discussion. During the discussion, it was not uncommon for people to fine-tune their communities—changing the boundaries to exclude some areas and to include others. Although many of the people we interviewed were most comfortable talking about just one community, close to half of the respondents identified two or more communities which they then compared and contrasted. After we completed the interview, we asked the respondents to consider the communities they had identified and

the information they had shared about these communities, and to tell us how confident they were that they had adequately described the perceptions and concerns of area residents. We used a seven-point scale to evaluate the informant's confidence, with one being "not at all confident" and seven being "extremely confident." Informants' levels of confidence ranged from four to eight, with an average of six.

Identifying Functional Communities

After completing all the interviews, we overlaid the different pieces of mylar on a map of Wisconsin. Armed with these key informant community drawings and information from the interviews, we drew the final boundaries for the Chequamegon-Nicolet functional communities. The boundaries of our 15 functional communities are not sacrosanct, but generally delineate areas where people relate to and use the national forests and other forest land in ways that differ from those of their neighbor communities.

Community Profiles

We then used information from the interviews to write community profiles. In general, one interviewer conducted all the interviews at a location, and that interviewer wrote the profile. However, because we couldn't predict beforehand the community boundaries, in some cases interviews conducted by both interviewers were used in a profile. Profiles include descriptions of (1) the community as a whole, (2) the community's relationship to forest resources and public lands, and (3) the community's relationship to the national forests including perceptions of national forest policies and employees. A list of issues important to key informants completes the profile. Community profiles were reviewed by Chequamegon-Nicolet National Forests staff to ensure that the profiles did not misrepresent the community. No profiles were changed as a result of this review.

Interviewers used the one to seven scale mentioned above to rate how confident they were that the community profile was representative of the area as a whole. The interviewer's confidence ratings was shown following the name of each community, along with the initials of the interviewer. Confidence in the profile does not necessarily reflect the number of people interviewed, but rather the knowledge displayed by the interviewees and their confidence in their stories.

Describing The People of Northern Wisconsin—Using Secondary Data

We used data from the U.S. Department of Commerce's Bureau of the Census to provide a broad overview of the people living in northern Wisconsin. The Social/Cultural/Economic Technical Report of the Southern Appalachian Assessment (Southern Appalachian Man and the Biosphere Cooperative 1996) provided guidance on the selection of census data to use as social indicators. The data are displayed in maps so that managers can see the geographic distribution of social indicators.

The 1990 census data are available through the Internet at <http://venus.census.gov/cdrom/lookup> (Bureau of the Census [n.d.]a). The steps followed to obtain the desired 1990 census data are illustrated in Appendix B by copies of the Internet pages as they appear in "1990 Census Lookup." County data from 1990 were copied from "1990 Census Lookup" and entered into a Microsoft Excel (version 5.xx) spreadsheet. The Excel shreadsheet was then used in ArcView (version 2.1) to produce maps of census statistics by county.

To further describe the functional communities and to provide some quantitative means of comparison between communities, township-level census data were tabulated for each community. Census data for each township within the community were summed to calculate descriptive statistics for that community. The community boundaries seldom perfectly matched township boundaries—communities consisted of whole townships and portions of other townships. For townships not completely encompassed by the community, the percentage of the township's area within the community was calculated. This percentage was applied to the census data for that township and that value was added to the data from other townships to arrive at a value for the whole community. The assumption made with this method is that the characteristic observed (for example, population) is evenly distributed across the township. Another problem with this approach is that we need township data to calculate community values,

and it is not easy to find much of the earlier census data by township. This limits our ability to calculate trends for the communities. Despite these problems, the use of categorical data to characterize functional communities provides another bit of information to help managers and partners understand the social dimension of the region.

Identifying Chequamegon-Nicolet Users—Using National Forest Permits

We wanted some sense of who is actually using the national forests. To this end, we collected use permit data for each ranger district. We were able to gather camping fee envelopes for most of the Chequamegon-Nicolet campgrounds. We drew a sample from each ranger district's envelopes, selecting our sample size to ensure a 95 percent confidence level. For each envelope sampled, we recorded the following information: ranger district, zip code of camper, date of visit, and length of stay. We used this information to map the zip codes of the hometowns of the Chequamegon-Nicolet campers.

We had hoped to have information on the people who use the national forests to harvest Christmas trees, boughs, moss, twigs, and other special products. Unfortunately there is no common set of data collected for these products—each district gathers and maintains different information. In the best case, we had zip codes, volume, and date for each product; in the worst case, we had just a count of the number of permits issued. Because we were unable to obtain a standardized data set, we could not map these special use permit holders.

FINDINGS

The People of Northern Wisconsin—Examples of Using Census Data to Characterize Residents of Counties

We used census data to describe the residents of the counties of northern Wisconsin. Unless stated otherwise, all the data discussed below came from the Bureau of the Census ([n.d.]a). Northern Wisconsin was defined as the counties in the two northern Forest Inventory and Analysis survey units (Smith 1986).[5] The Bureau of the Census collects mountains of data at various levels of specificity. The purpose of this section of the social assessment was to introduce decisionmakers to some of the information available, and to give an overview of the social conditions in northern Wisconsin. In places we were able to supplement findings from the census with other analysis. Below are examples of the type of information contained in the assessment.

Population

The population of Wisconsin is unevenly distributed. The population density of northern Wisconsin is 22 residents per square mile, while in the south the density jumps to 128 residents per square mile. Counties near large metropolitan areas in the southern half of the State have more than 300 residents per square mile, while many of the counties in the northern half of the State have less than 25 residents per square mile (fig. 4). Fourteen of the nineteen counties with the lowest density (less than 25 residents per square mile) are in the northern half of Wisconsin (the counties closest to the two national forests).

Like most States, Wisconsin has become more urban since the late 1800's (Haverkampf *et al.* 1996) (fig. 5). However, the increase in urban population has not come at the expense of the rural population—the population of Wisconsin's rural areas has been relatively constant since 1890.

The 1990 Census found that nearly 74 percent of the residents of northern Wisconsin live in areas classified as rural, while only 30 percent of the residents in southern Wisconsin live in rural areas. The most urban counties in northern Wisconsin are Langlade (42 percent), Lincoln (49 percent), Ashland (53 percent), and Douglas (66 percent). Another indication of the rural nature of northern Wisconsin is found in Census data on waste disposal. Thirty-two percent of northern Wisconsin households are served by public sewer systems, compared to 76 percent of households in southern Wisconsin.

Figure 6 illustrates how counties shifted from "rural" to "suburban" to "metropolitan" between 1930 and 1990 (Haverkampf *et al.* 1996). With only a couple of exceptions, the counties in and around the Wisconsin national forests have maintained their rural status over

[5] *In figure 4, readers can see the counties that make up northern Wisconsin (above the dark line) and southern Wisconsin (below the dark line). This is the breakdown used throughout the report.*

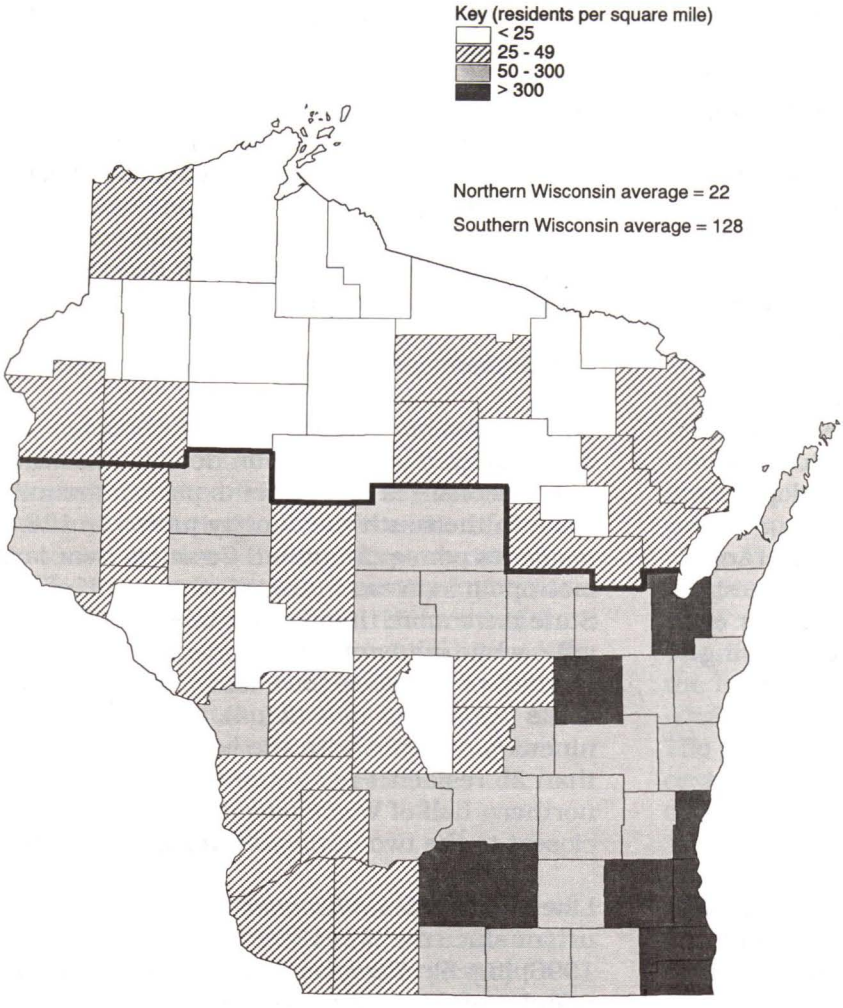


Figure 4.—*Population density of Wisconsin counties, 1990 (U.S. Bureau of the Census 1997).*

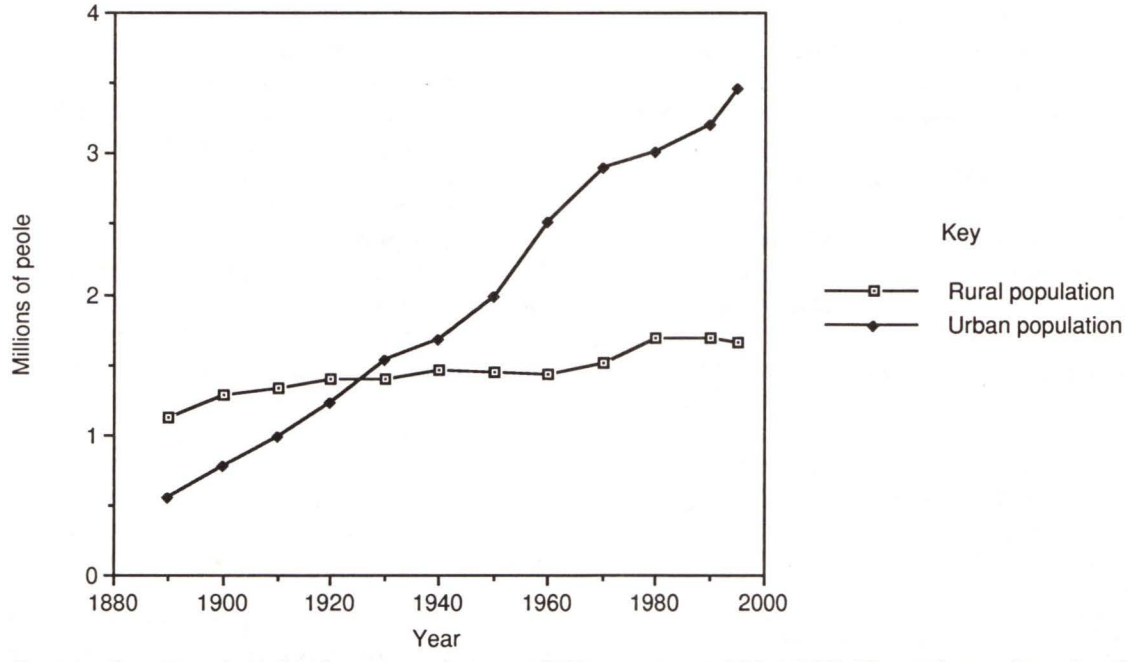


Figure 5.—*Rural and urban population of Wisconsin, 1890-1995 (Haverkampf* et al. *1996).*

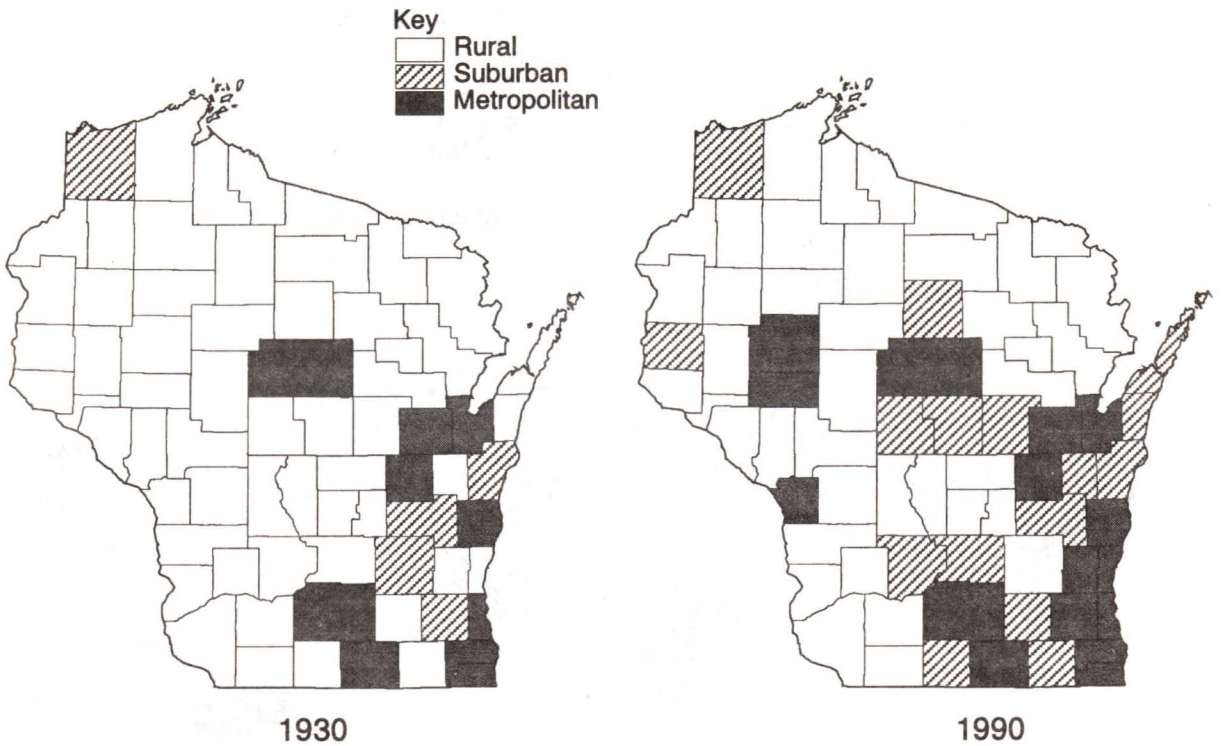


Figure 6.—*Classification of Wisconsin counties as rural, suburban, or metropolitan, 1930 and 1990 (Haverkampf* et al. *1996).*

the past 60 years. Designation as rural, suburban, or metropolitan is based on Bureau of the Census statistics, plus county economic profiles that include information on manufacturing, retail businesses, personal income, and commuting patterns.

Figure 5 shows how rural populations have remained relatively constant statewide over the past 60 years. The population of northern Wisconsin has demonstrated a similar trend (fig. 7).[6] Between the 1980 and 1990 census, the population in northern Wisconsin increased by less than 2 percent. The population growth in northern Wisconsin has been only half of the southern Wisconsin average. In the northern half of the State, the population of 7 of 22 counties has declined.

[6] *All maps of northern Wisconsin are based on county-level data; however, the county boundaries have, for the most part, been erased from these maps. We felt it was more important to show the data in relation to the national forest boundaries than county boundaries. Readers can return to figure 3 to review the location of county boundaries.*

Evidence of the stability of Wisconsin's population is also found in Census data indicating where 1990 county residents were living in 1985. More than 83 percent of Wisconsin's residents (5 years of age and older) lived in the same county in 1990 as they did in 1985. In northern Wisconsin, the percentage of residents new to the county since 1985 ranges from a low of 8 percent for Menominee County to a high of 25 percent in Florence County. Other northern Wisconsin counties with at least one in five residents new to the county include Ashland (20 percent), Washburn (20 percent), Burnett (21 percent), Oneida (21 percent), Vilas (21 percent), and Sawyer (22 percent).

Cities In or Near the National Forests

Although the Wisconsin national forests do not have any large cities (over 25,000 population) within or adjacent to their boundaries, they are within a day's drive of several major metropolitan areas (fig. 8). An analysis of the home zip codes of the campers on the Chequamegon-Nicolet in 1996 shows that the vast majority come from within this 300-mile arc (fig. 9).

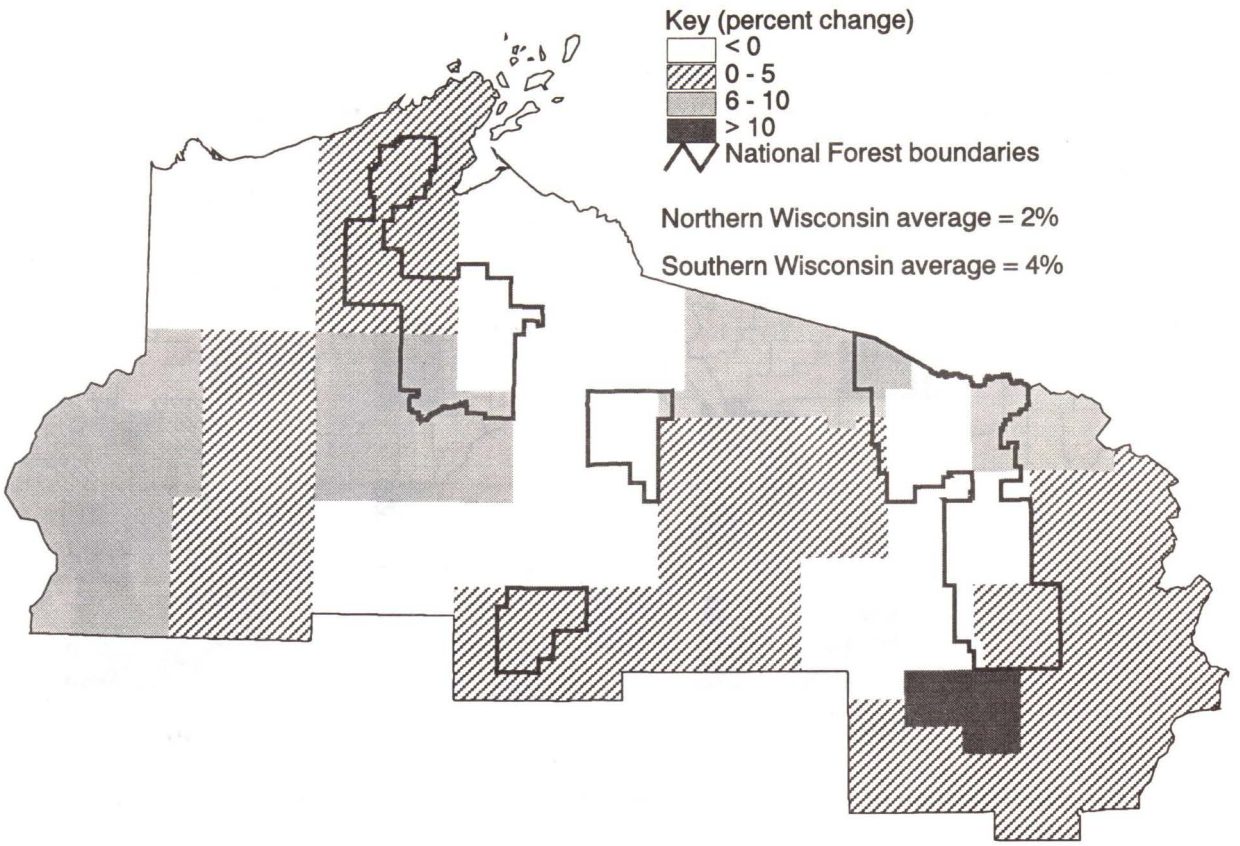


Figure 7.—*Percent change in population, northern Wisconsin by county, 1980-1990 (U.S. Bureau of the Census [n.d.]a).*

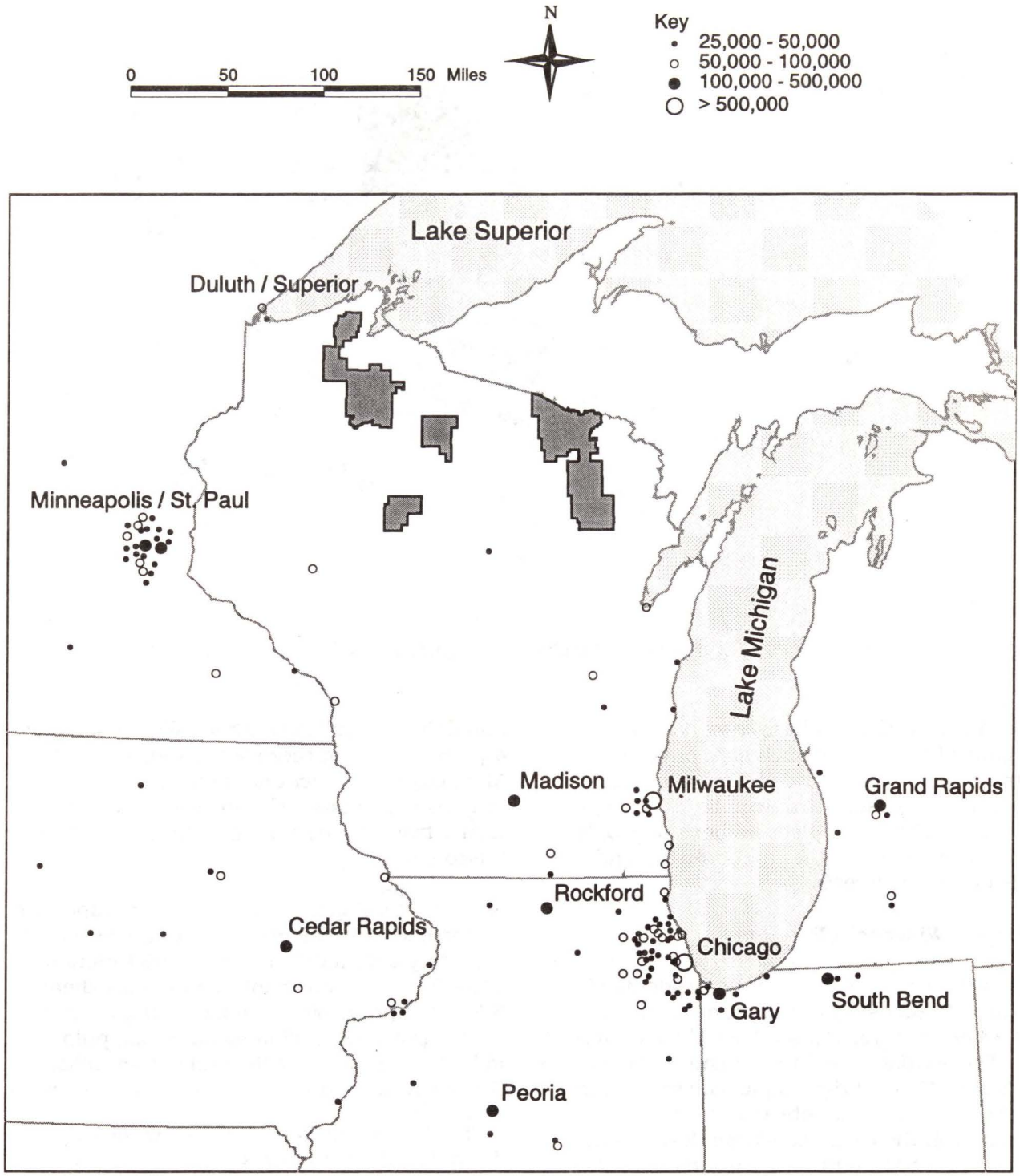


Figure 8.—*U.S. cities and towns within 300 miles of the Chequamegon-Nicolet National Forests, 1990 (U.S. Bureau of the Census [n.d.]b).*

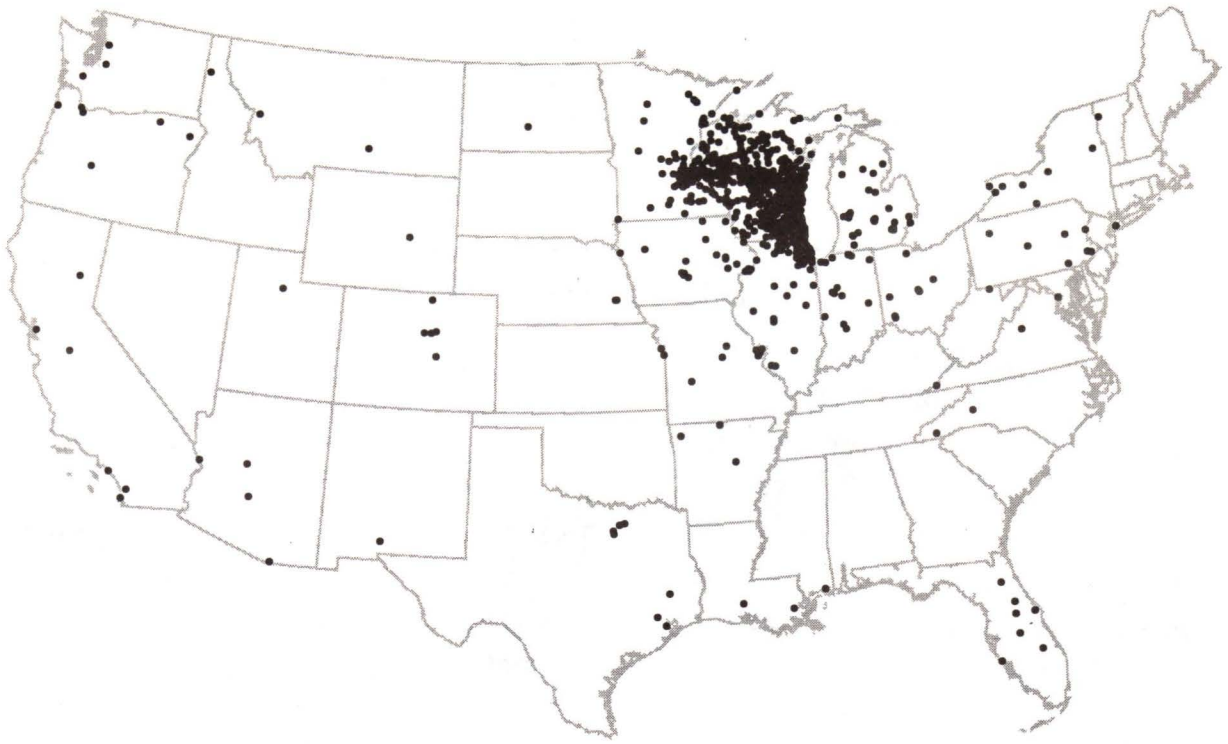


Figure 9.—*Home zip codes of campers on the Chequamegon-Nicolet National Forests, 1996.*

Lake Michigan forms a barrier to visitors from the Lower Peninsula of Michigan, but the metropolitan areas in and around Chicago, Milwaukee, Madison, Minneapolis/St. Paul, and Duluth/Superior place millions of people within a few hours of the campgrounds and trails of the two forests.

Northern Wisconsin Economy

Approximately 24 percent of the residents of northern Wisconsin work in manufacturing and 28 percent work in service industries (fig. 10). These values are fairly constant across the State. Many of the people who work in the service sector work in jobs related to tourism, especially in the rural recreation destination counties found in northern Wisconsin. Data collected by Stynes (1997) clearly show the high level of tourism expenditures in northern Wisconsin[7] (fig. 11).

Occupation data show that in northern Wisconsin, approximately 8 percent of the workforce is employed in forestry, agriculture, and fisheries, but in southern Wisconsin, only 4 percent work in these occupations (fig. 12). More than 12 percent of the workers in northern Wisconsin are self-employed, which is nearly twice the percentage found in southern Wisconsin.

Wood processing facilities are major employers in northern Wisconsin.[8] Forest Service forest inventory data indicate that in 1994 more than 14,000 people were employed in approximately 370 wood processing facilities in the northern part of the State, including sawmills, pulp mills, particleboard mills, and veneer mills. Small sawmills (producing less than 1 million

[7] *Tourism expenditures are dollars spent in the destination county by any person staying overnight in commercial lodging (motel, cabin, campground, etc.) or with a relative or friend, and any dollars spent by people making day trips of more than 50 miles.*

[8] *Information for this section, including figures 12 and 13, came from personal communication with Ron Hackett, FIA, North Central Research Station, May 1, 1997.*

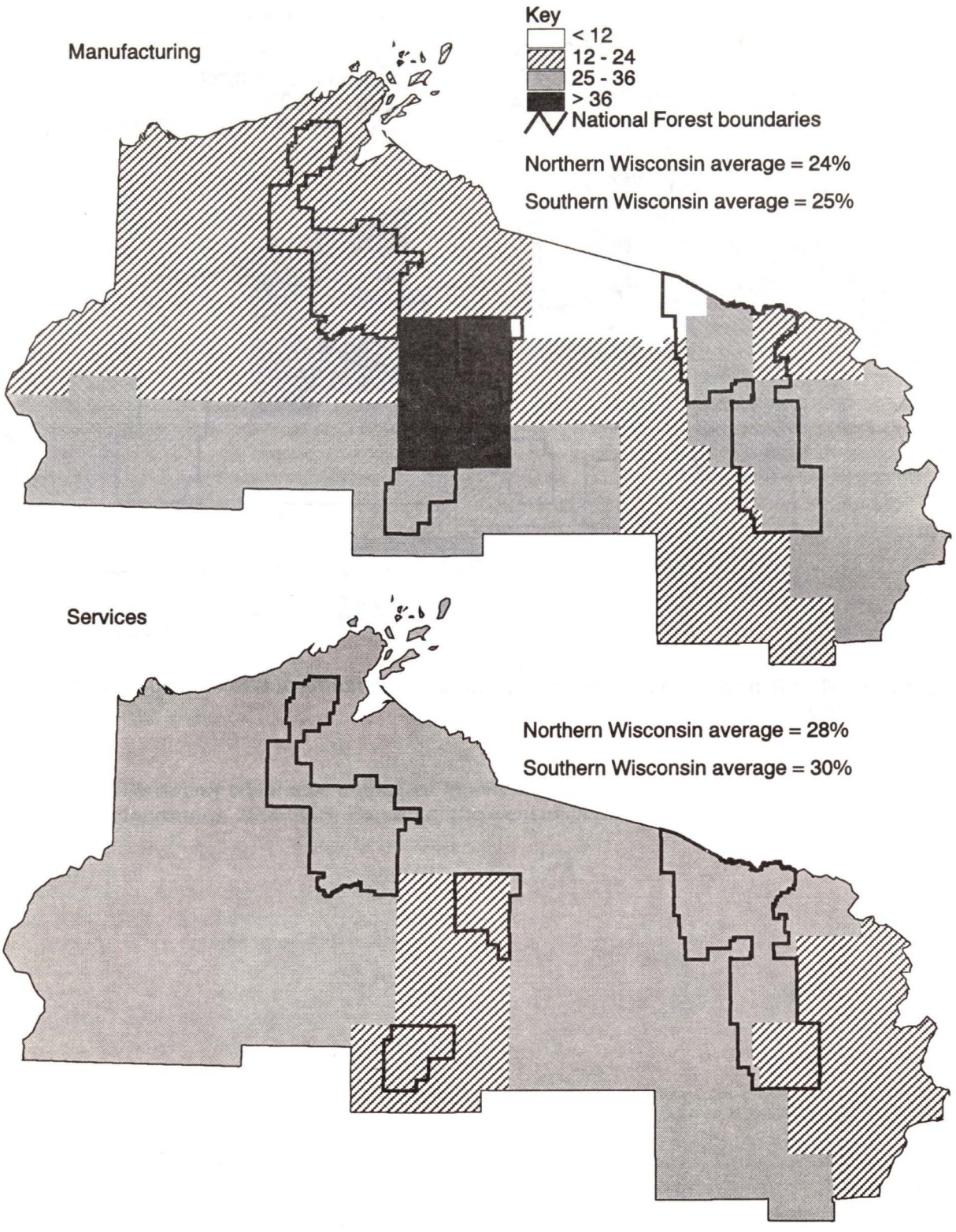


Figure 10.—*Percent of workforce in manufacturing and percent of workforce in service industries, northern Wisconsin by county, 1990 (U.S. Bureau of the Census [n.d.]a).*

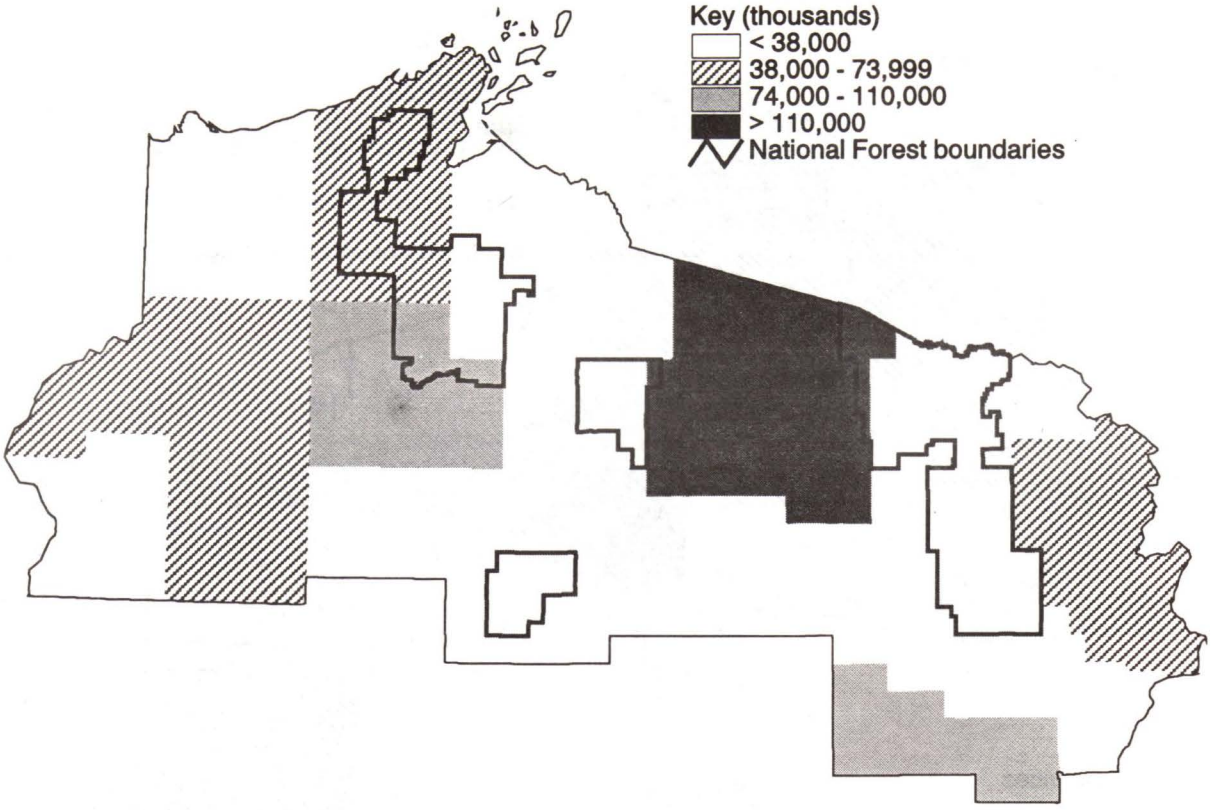


Figure 11.—*Tourism spending (thousands of U.S. dollars), northern Wisconsin by county, 1990 (Stynes 1997).*

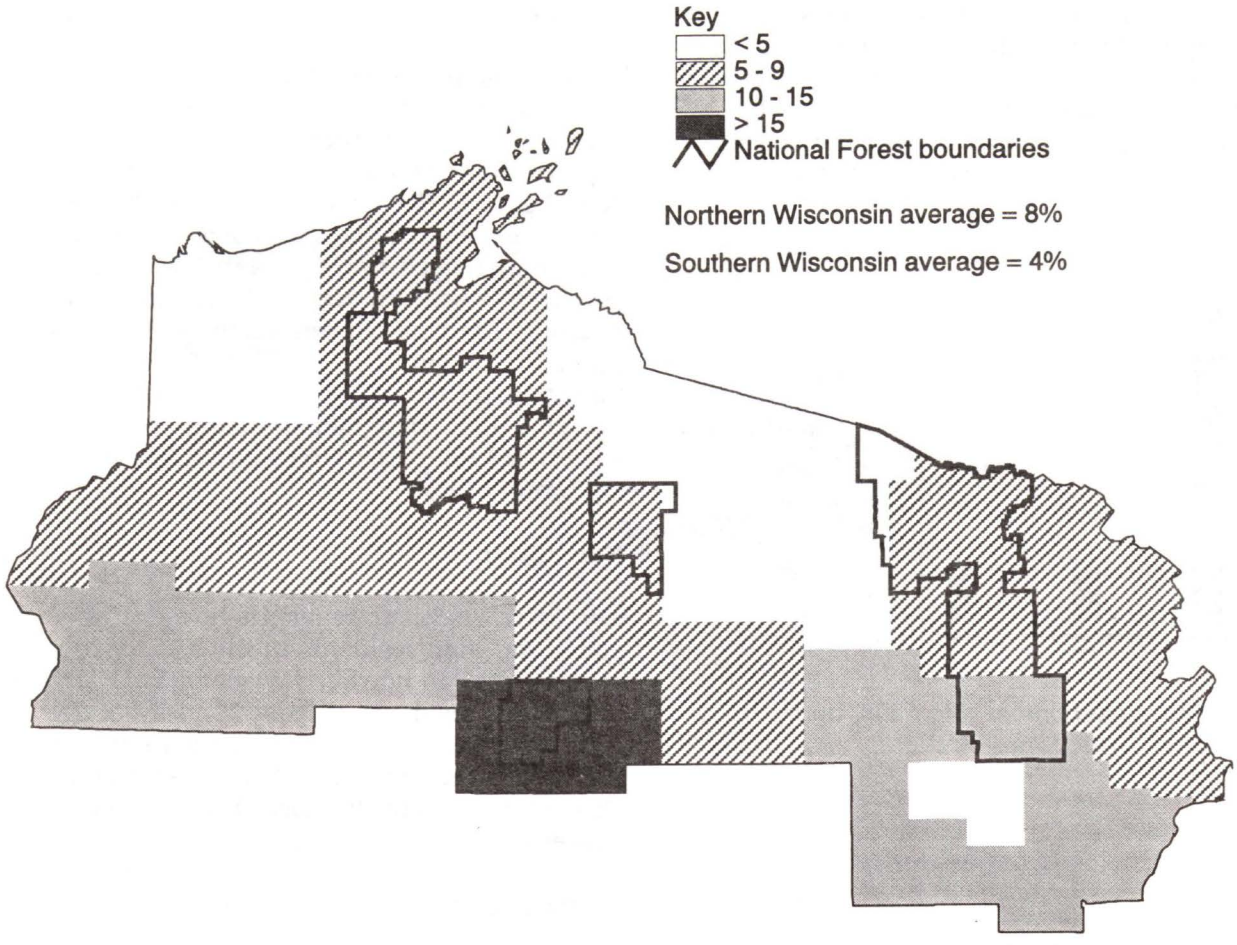


Figure 12.—*Percent of population employed in forestry, agriculture, and fisheries, northern Wisconsin by county, 1990 (U.S. Bureau of the Census [n.d.]a).*

board feet annually) are by far the most numerous type of facility (fig. 13). Unfortunately, these facilities are so transitory that they are very difficult to track. Except for the small sawmills, the number of wood processing mills increased in northern Wisconsin between 1967 and 1994 (fig. 14).

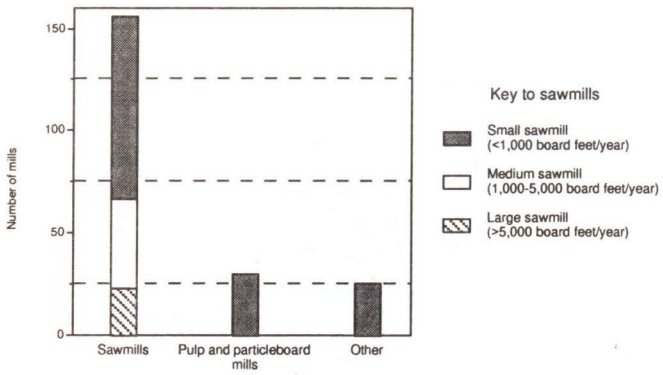
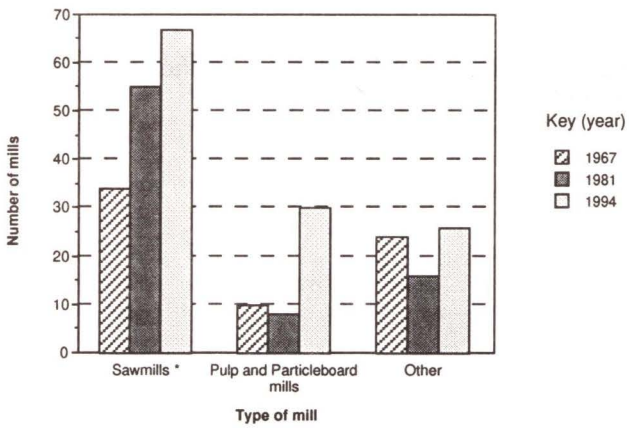


Figure 13.—*Wood processing mills, northern Wisconsin, 1994 (unpubl. data).*



* Includes only those mills producing more than 1 million board feet annually

Figure 14.—*Number of wood processing mills, northern Wisconsin, 1967, 1981, and 1994 (USDA Forest Service, Forest Inventory and Analysis).*

Income

The average per capita income of a northern Wisconsin resident in 1989 was $10,400, approximately 77 percent of the average per capita income of a southern Wisconsin resident (fig. 15). Between 1979 and 1989, per capita income increased across Wisconsin; income increased by more than 10 percent in northern Wisconsin and by 9 percent in the south.[9] The increases in northern Wisconsin range from a low of 1 percent in Douglas County to a high of more than 20 percent in Price County. Only Menominee County showed a loss in per capita income between 1979 and 1989.

Education

Northern Wisconsin residents have less formal education than residents in the southern part of the State. In northern Wisconsin, 12 percent of the residents at least 25 years of age have less than a ninth grade education compared to 8 percent in southern Wisconsin. Fewer residents in the north have college degrees—18 percent of northern Wisconsin residents at least 25 years of age have college degrees compared to 26 percent in the south.

Housing

The median year of home construction is an indicator of social status in that more modern housing is associated with economic growth and communities in transition. The median year of home construction in northern Wisconsin is 1964, which is 4 years later than in southern Wisconsin (fig. 16). This statistic reflects the increase in summer home construction in many of the northern communities over the past 10 to 15 years.

The estimated median value of a house in northern Wisconsin, however, is significantly lower than in southern Wisconsin—$44,700 vs. $69,300 (fig. 17). The median value of a home has declined significantly in Wisconsin and across the northern tier of States. The median value of a Wisconsin home was

[9] *1979 income data from the 1980 Census was adjusted to 1989 using the Consumer Price Index as provided by the Bureau of the Census, Housing and Household Economics Statistics Division, personal communication July 14, 1997.*

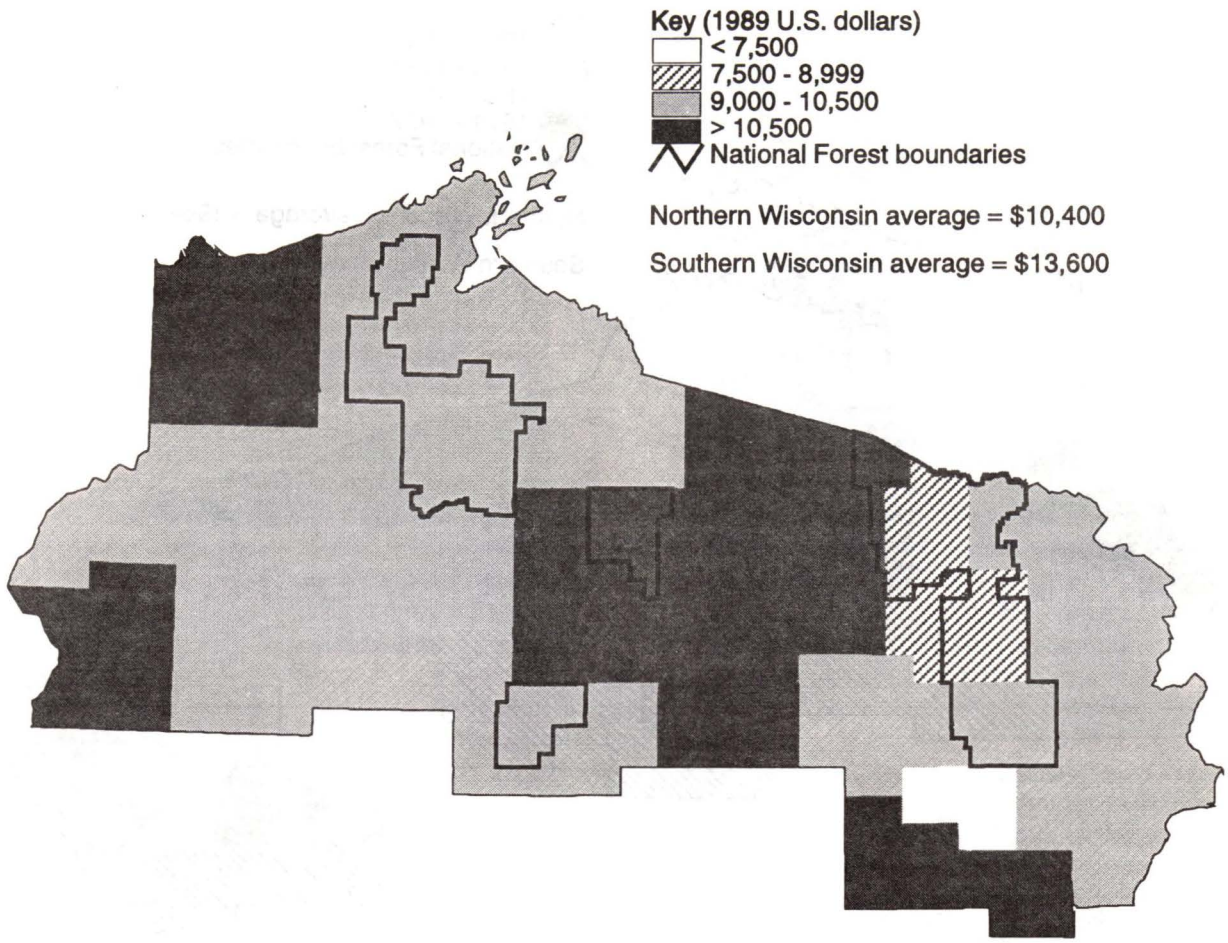


Figure 15.—*Real per capita income, northern Wisconsin by county, 1989 (U.S. Bureau of the Census [n.d.]a).*

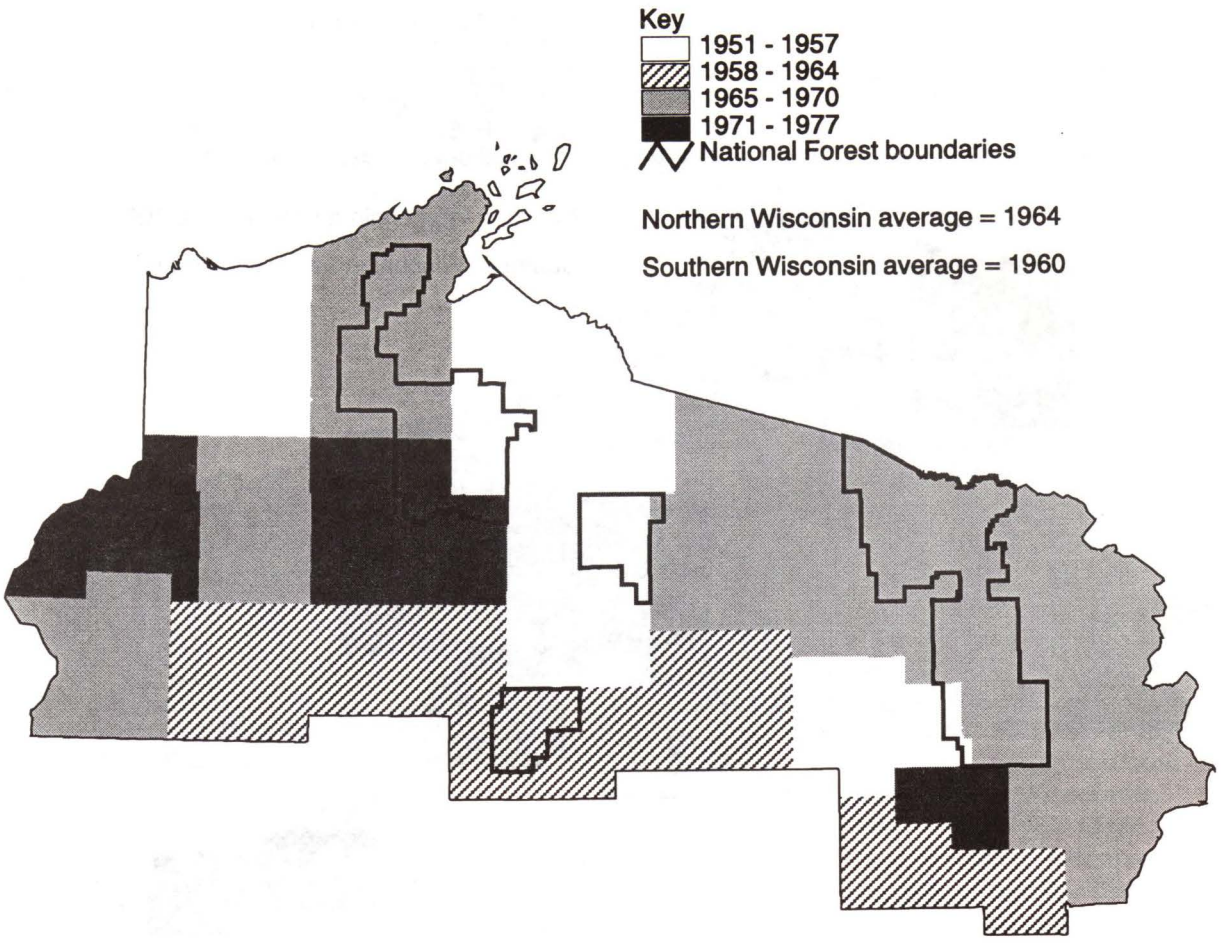


Figure 16.—*Median year of home construction, northern Wisconsin by county, 1990 (U.S. Bureau of the Census [n.d.]a).*

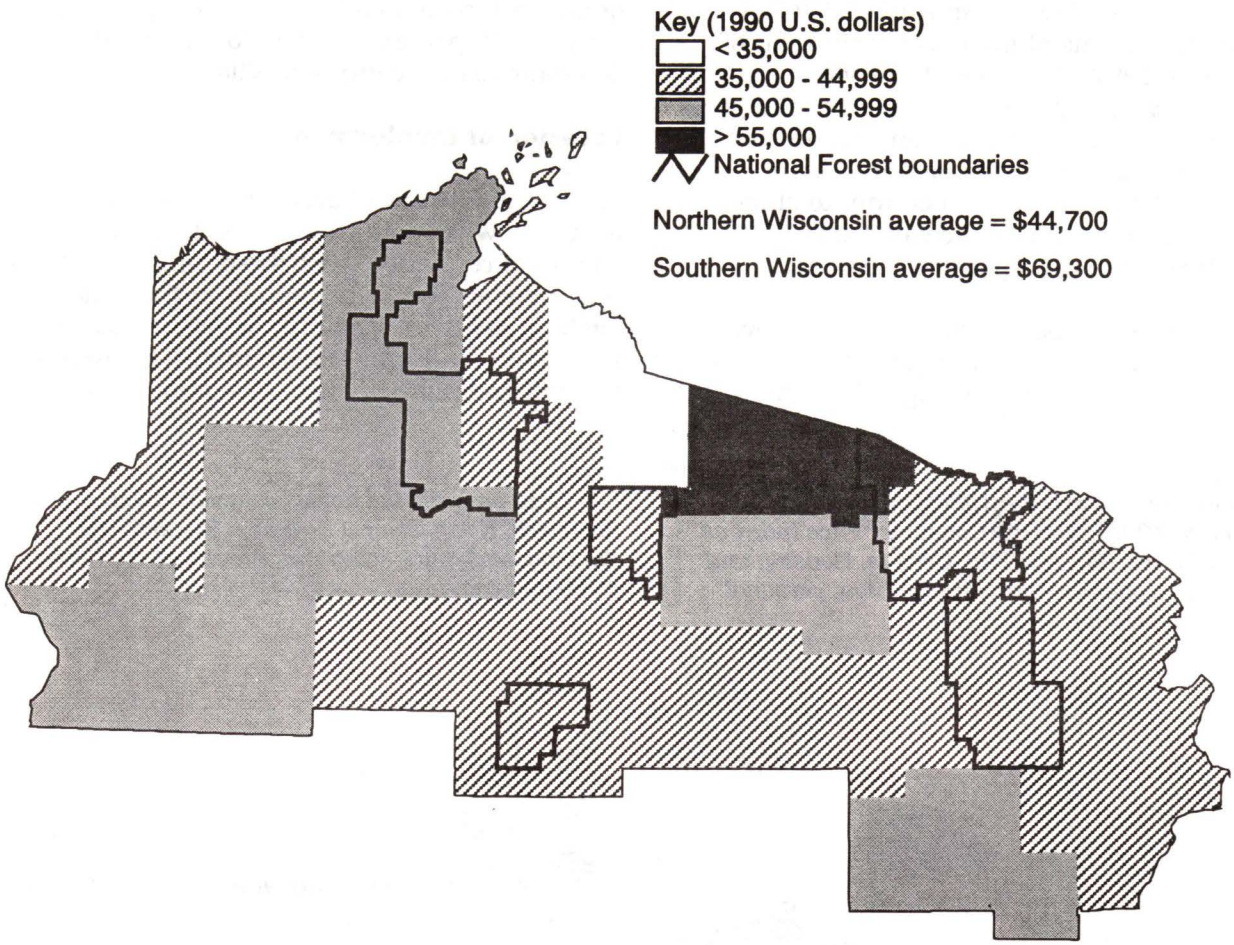


Figure 17.—*Median housing value, northern Wisconsin by county, 1990 (U.S. Bureau of the Census [n.d.]a).*

$77,200 in 1980; Wisconsin ranked 17th in the nation in terms of home value (Bureau of the Census 1992).[10] By 1990, the value had dropped to $62,500, and the State's ranking fell to 30th. In northern Wisconsin, the median value of a home fell from $55,600 to $44,700. The only northern county to show an increase in median home value was Menominee, with a 12-percent increase.

In northern Wisconsin, nearly one out of every three homes is a seasonal home (fig. 18).[11] In several counties, the percentage of seasonal home ownership is 50 percent or higher—Burnett (50 percent), Forest (50 percent), Shawano (52 percent), and Vilas (58 percent).

Location of Employment

More than one out of every five residents of northern Wisconsin travel outside their county of residence to work—driving to one of the major employment centers in the region such as Ashland, Medford, or Green Bay in Wisconsin, and Iron Mountain and Ironwood in Michigan (fig. 19). Leatherman and his

[10] *Home values from the 1980 Census were adjusted to 1990 using the Consumer Price Index as provided by the Bureau of the Census, Housing and Household Economics Statistics Division, personal communication July 14, 1997.*

[11] *Data on seasonal homes compiled by M. Vasievich, North Central Research Station, East Lansing, Michigan, using U.S. Bureau of the Census 1990 housing data.*

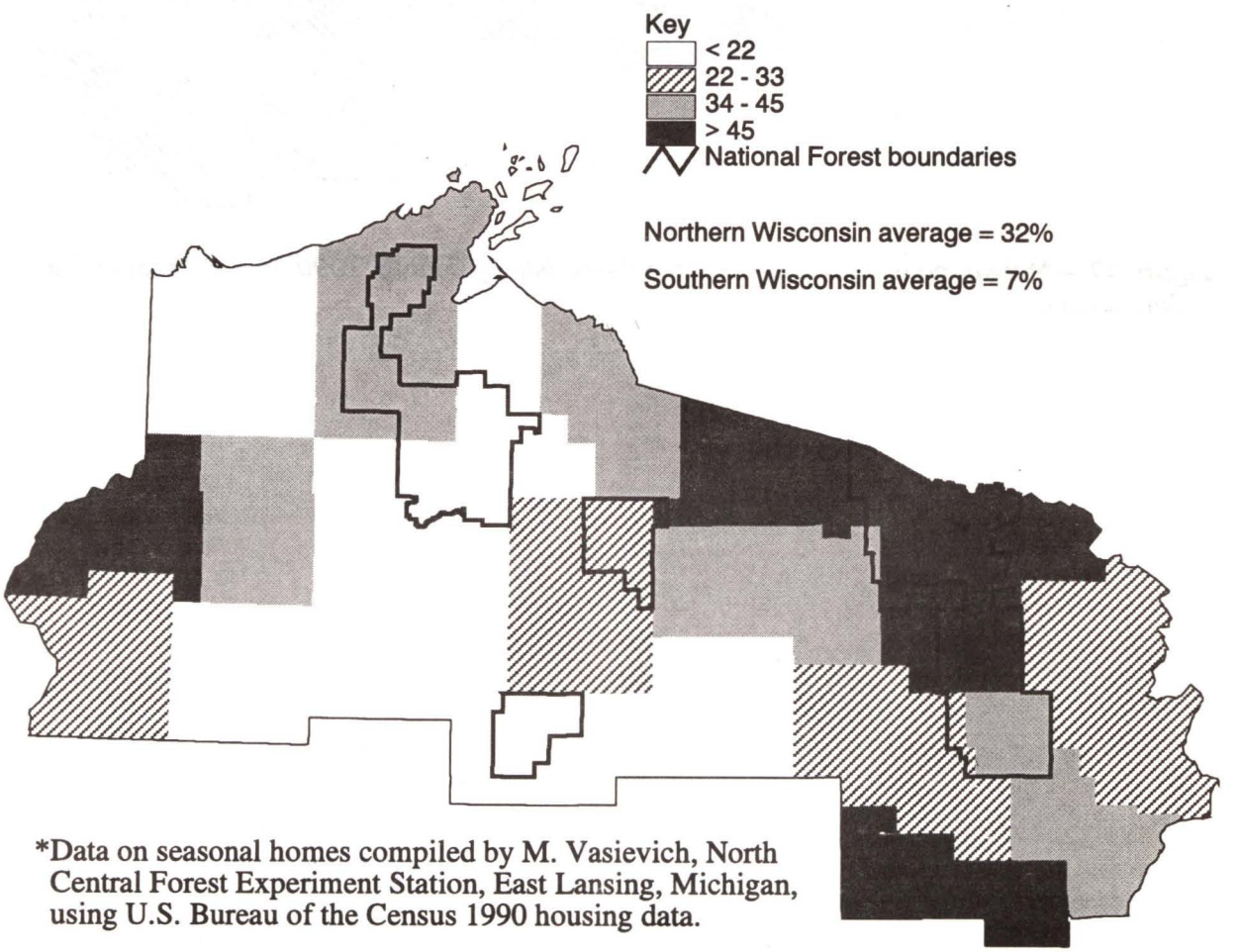

Key
< 22
22 - 33
34 - 45
> 45
National Forest boundaries
Northern Wisconsin average = 32%
Southern Wisconsin average = 7%
*Data on seasonal homes compiled by M. Vasievich, North Central Forest Experiment Station, East Lansing, Michigan, using U.S. Bureau of the Census 1990 housing data.

Figure 18.—*Seasonal homes as a percent of total residences, northern Wisconsin by county, 1990*.*

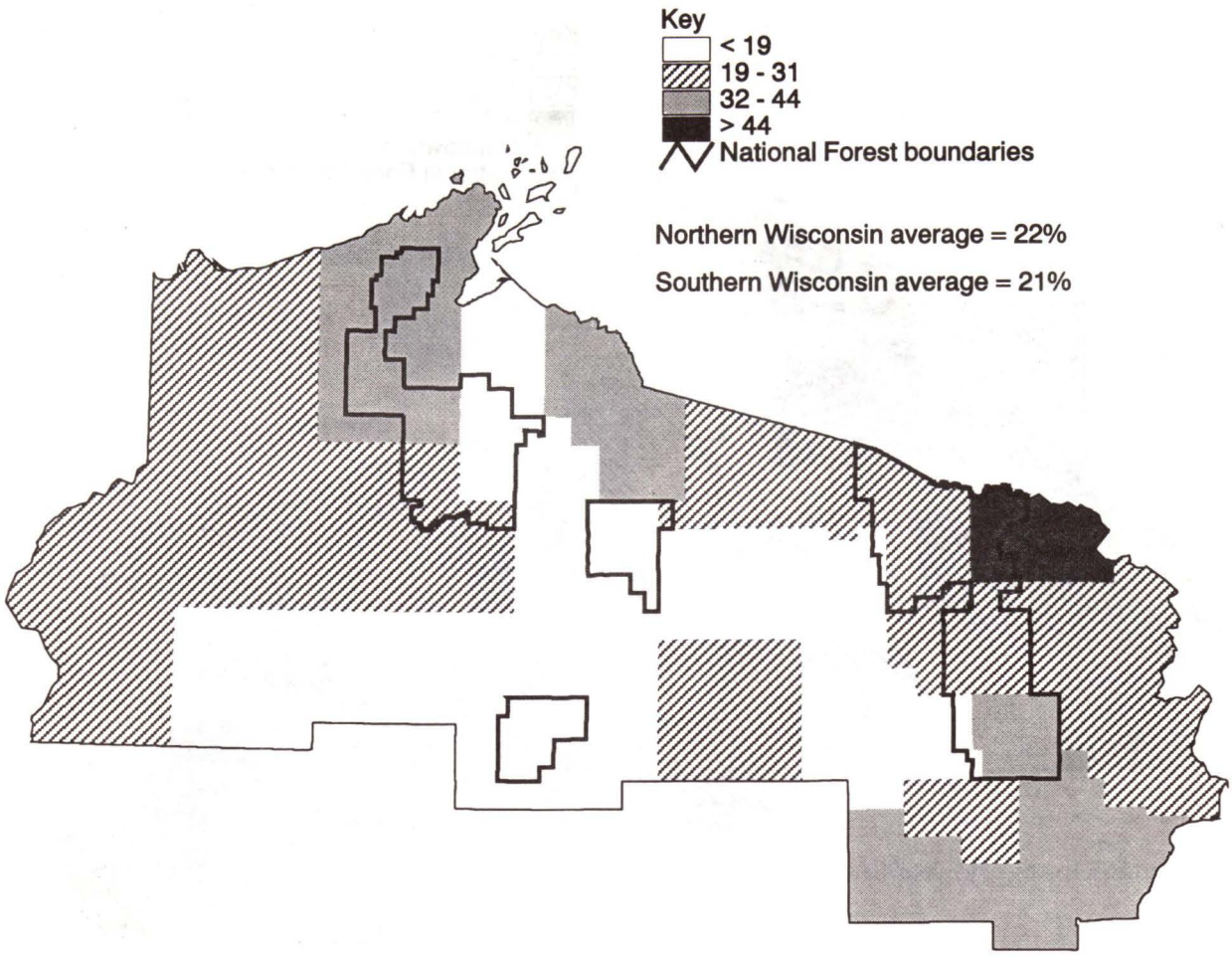


Figure 19.—*Percent of workforce working outside their county of residence, northern Wisconsin by county, 1990 (U.S. Bureau of the Census [n.d.]a).*

colleagues (1993) have a little different way of looking at commuting patterns—they calculate the ratio of the number of people who travel outside the county to work versus the number of people who travel into the county to work. So, for example, in 1980 Ashland County had a commuting ratio of 0.59 (the lowest of any county in northern Wisconsin), meaning that more than twice as many people traveled into Ashland County to work as traveled out (fig. 20). Next door, in Bayfield County, the ratio was 2.71; nearly three times as many people traveled outside the county to work as traveled into the county—and they probably traveled into Ashland County. The highest commuting ratio was in Oconto County (6.79), where residents travel into Green Bay to work.

Functional Communities of the Wisconsin National Forests

The identification of functional communities of the Chequamegon-Nicolet National Forests was the unique contribution of this social assessment to the literature. Using the community maps drawn by our 46 informants and information from interviews, we identified 15 functional communities for the Chequamegon-Nicolet National Forests (fig. 21). Profiles reflecting what we learned during these interviews were developed for each community.

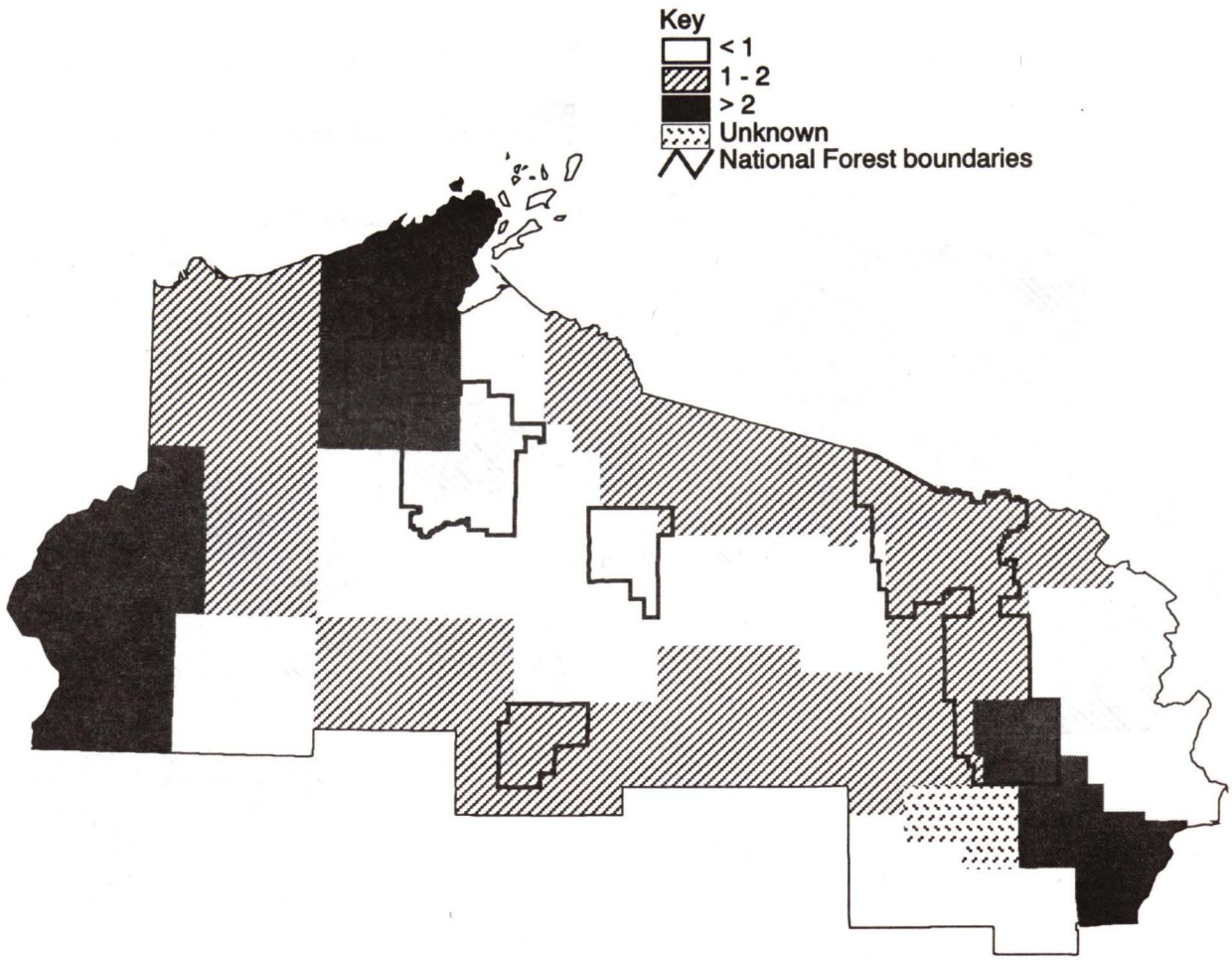


Figure 20.—*Commuting ratios (number of people traveling out of the county to work/number of people traveling into the county), northern Wisconsin by county, 1980 (Leatherman* et al. *1993).*

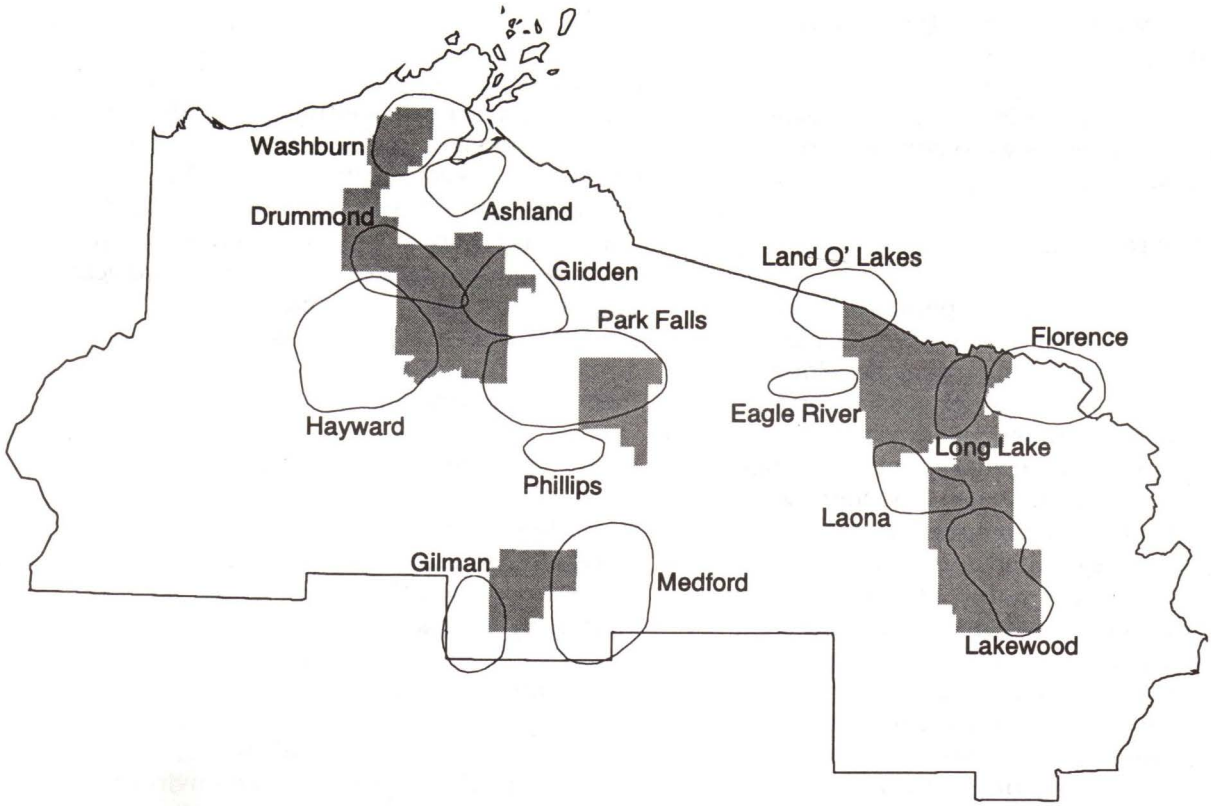


Figure 21.—*Functional communities (polygons) of the Chequamegon-Nicolet National Forests (shaded areas).*

Common Themes from Key Informant Interviews

Although the communities described below are unique, several themes were common in all communities.

Influx of new residents

All the communities have experienced an influx of people (either seasonal or permanent residents) and the accompanying development, but our informants had different opinions about the actual or potential impacts of these retirees, second-home owners, and other new residents. Some felt that new residents were absorbed within the community and had little or no impact—these informants were in the minority. Most of the people we talked to recognize that new residents bring different perspectives and values into their communities, and that new residents are having an impact on the way the local communities are governed. Although we heard very little about conflicts between long-time local residents and new residents, we definitely detected some concern that conflicts between these two groups could surface. Because our informants indicated that potential differences are likely to occur over the management and use of public lands, the Forests will have opportunities to minimize or eliminate some of the potential conflicts through their public involvement activities and management decisions.

Taxes

Almost everyone complained about the high property taxes in their community, and blamed, to a certain extent, their high taxes on the need to make up for income not being generated by land controlled by the Forest Service and other public agencies. However, while residents complain, they also accept payment of these taxes as their cost for maintaining the high quality of life they value—a quality of life directly tied to the national forests and other public lands. Local residents see the Forests as providing access to valuable resources or benefits that are becoming more and more scarce. This is especially true in areas experiencing rapid and intense recreational development, where the inflated costs of lakeshore property and large tracts of forested land prohibit their purchase by local residents.

Public schools

Residents in many communities mentioned their public schools—either the pride they take in their school or the devastation they felt at the loss of a community school. This role of the school in defining communities could be used by the Forest Service in public involvement activities—either by building involvement programs for students (and trusting that the students will carry the message home) or by developing family involvement activities through the schools.

All-terrain vehicles

Regardless of whether informants lived on the Chequamegon or the Nicolet, most participants recognized that there would be some change in the way their Forest manages all-terrain vehicles (ATV's). People on the Chequamegon realize they will see some restrictions on use of ATV's on national forest land as competition for trail usage and concern about ATV impacts on the environment continue to build. People on the Nicolet realize they will see some legal ATV use on their Forest, but they want to be sure that the Forest isn't "wide-open like the Chequamegon."

Forest planning

Many of our key informants expressed confusion and frustration over the forest planning process. They interpreted the harvest quantities and other specifics in the last forest plans as promises that the Forests have broken. In addition, many of our informants expressed an interest in participating more fully in forest management and planning. Both of these observations highlight the need to practice participatory planning, with a shared understanding of forest planning processes, including the goals and the implications of management alternatives and targets.

Human dimension of ecosystem management

Finally, residents of the Chequamegon-Nicolet communities are intimately familiar with the concept referred to in the Forest Service as the human dimension of ecosystem management. This concept focuses on people as part of ecosystems—with changes in forest conditions

affecting people through each of the four dimensions of the social system (economic, political, community, and cultural) and people affecting forest conditions through management and use. So, while they recognize the importance of maintaining the health and productivity of forest ecosystems, they do not see ecosystem health as an end in itself—they see it as a way of maintaining and improving the health of their communities. They want to see the social impacts of forest management decisions analyzed and discussed.

Community Profiles

Below are 4 of the 15 community profiles developed for the Chequamegon-Nicolet National Forests. These profiles are included as examples of the type of information included in the profiles, and the variety of relationships and issues we found in the different communities.

Community—Drummond (TEF, Confidence = 5) [12]

Description—The Drummond Community is located in an area that focuses on forest- and lake-based recreation and tourism. There is also a small agricultural area in the northeastern portion of the community. The timber industry, while important to Drummond's economy, is not a large presence in defining the character of the community. The school district and churches provide the foundation for social interaction in the community. Residents feel that although the area is relatively isolated, they have the resources of Ashland, Hayward, and Duluth-Superior within an hours' drive. The quality of life and more relaxed atmosphere in the community are among the values gained, not lost, by living away from larger cities.

New residents and visitors alike come to the area to take advantage of Drummond's abundant natural resources and recreational opportunities. Retirees, (younger) former residents, and business people were mentioned as the groups moving into the Drummond area. A fair number of residents commute regularly to Ashland and Duluth-Superior. Others telecommute via fax and modem.

The area draws a large number of visitors for a wide array of recreation. One example mentioned was the increased interest in mountain biking and the annual Chequamegon Area Mountain Bike Association's (CAMBA) *Chequamegon Fat Tire 40* race, which brings 2,500 competitors to the area from around the world. One informant mentioned that the community has changed somewhat from the influx of new residents and the expansion of local recreational activities and opportunities. Another informant remarked that the changes have had an influence on the incidence of juvenile crimes and a gradually increasing drug problem in the community.

Links to forests and public lands—The emphasis on recreational activities (hunting, fishing, water sports, winter sports) and enjoyment of the outdoors relates directly to area natural resources. Local residents are interested in maintaining their quality of life and the quality of the environment. They want clean water and healthy forests. One informant mentioned that cooperative projects between community groups and resource managers are common. CAMBA works with Forest managers and locals to provide mountain biking opportunities for residents and visitors. Boy Scout troops and other youth groups help to maintain trails. Northland College in Ashland has a strong interest in the local environment. The "North Woods" atmosphere is part of the way of life in this community.

Ties to the national forest—Forestry and forest products play a key role in the local economy. Exception in the farm area, one informant felt the distribution of jobs in the area is approximately 50 percent forest related and 50 percent recreation and tourism related—with the two sectors making up 75-80 percent of jobs in Drummond. One informant noted that in Bayfield County's economy, the recreation and tourism industry is number one and forestry

---

[12] *Initials indicate the author of the profile: TEF is Thomas E. Fish, PJJ is Pamela Joyce Jakes. Key informants were asked to rate on a scale from one to seven how confident they were that the information they gave interviewers was representative of the area as a whole (one = not at all confident, seven = extremely confident). The confidence level shown following the community name indicates the level of confidence interviewers had that the profile they developed reflects the community as a whole.*

(logging and forest products) is number two. Both of these industries are influenced directly by the Forest and its management. Area forests—Federal, State, county, and private—are all linked to the viability of the forest-dependent occupations of northern Wisconsin. The presence of the Forest Service has an influence on the people and the community. It is part of the character of the community and has been something residents and visitors expect and identify with when they think of this area.

Issues/questions—

- Land prices are getting higher and land is becoming more scarce. What will happen to medium income families? Will they be able to afford to continue living in the area?

- Recent population growth has caused an increase in taxes. With the influx of outside money into the area (new home development and land purchases), home values are increasing; consequently, taxes are rising to the point where individuals (retirees) on fixed incomes can no longer afford to live here.

- Concern about an increase in juvenile crimes and drug use.

- Concern about adequately protecting water, air, and forest from misuse and overdevelopment. How can we be sure that regulations are strict enough to protect the community's natural resources?

- Concern about managers making sound management decisions.

- How can we minimize the impacts of outboard motors and snowmobiles on water quality (e.g., snowmobile oil and exhaust remains on ice and in snow until thaw when pollutants go directly into lake, stream, watershed)?

- Conflicting views between locals and new residents on land use practices.

- Belief that natural resource management would not be improved by private ownership.

Community—Eagle River (PJJ, Confidence = 6)

Description—Eagle River is a community defined by its lakes and forests. Interviewees told us that these two resources combine to form the "Great North Woods Experience." Eagle River is a tourism-dependent community, with income generated from recreational activities conducted on and in some form of water—be it frozen or liquid. Many people who vacation in the Eagle River Community eventually retire in the area. In addition to retirees, the area has seen new residents move into the community to start businesses in support of the tourist trade and to enjoy the high quality of life. Participants indicated that tourism has always been the number one income generator in the community, with forestry a distant second. However, forest-related jobs do produce a high level of income for a small number of people. In addition, the area is not without its manufacturing sector; several mills in the area depend on raw material from area forests. The forestry sector is represented by Trees for Tomorrow, a highly regarded natural resources education center in the town of Eagle River.

Over the years, the influx of new residents into the Eagle River Community has produced a diverse population. The community itself represents many of the issues seen on a much broader scale as we move along the urban to rural continuum—with ecological and social impacts resulting from high density populations putting pressure on less developed rural areas. The Eagle River Community is protected from some of the development pressure by the fact that the town of Eagle River is land-locked—there aren't many options for expansion because of the surrounding lakes. However, being land-locked can also focus the environmental and social impacts more intensely in a smaller area.

The recreational pursuits enjoyed by the residents of and visitors to the Eagle River Community represent a midpoint between the low-level silent recreation described for the Florence Community and the highly commercialized, large volume, big-motor recreation found in the Minoqua area. Residents welcome and support the growth in tourism, but they told us that they don't want to see the level and type of development found in the Minoqua area. Over the years, vacation stays

have become shorter, with the 1-week family vacation at a resort (with its complete service package including meals and recreational equipment) being replaced by the long weekend stay at a motel. These shorter stays at motels have spurred the demand for the "other" services originally supplied by the traditional resort—a demand being met by fast food restaurants, marinas, and other rental businesses.

Links to forests and public lands—The Eagle River Community is tied to the area forests and public lands primarily through recreation. Campgrounds in the Eagle River Ranger District have more visitors than any other district on the Chequamegon-Nicolet National Forests. The public forest lands provide valuable access to lakes that are becoming inaccessible to boaters and other water recreationists due to development. The question of access to area lakes is the number one issue with long-time residents who cannot afford the tourist-inflated prices of lakeshore properties.

Ties to the national forests—The resorts and other recreational businesses in the areas depend heavily on access to Nicolet National Forest lands. Many resorts in the area are located within the national forest boundaries and promote their access to Forest trails and other facilities as part of their vacation packages. We were told that the Eagle River Community, without the national forest, would see "twice the development and a hodgepodge of incongruous land management." So, the Forest provides not only access to the area lakes and woods, but also a check on development in the area. Decisions about recreational development and management of Forest lands could affect large numbers of people from throughout the Lakes States Region; decisions about harvest levels could have significant impacts on smaller numbers of people within the Eagle River Community and adjacent areas.

Forest Service managers are seen as members of the community, but community members are often frustrated by the "revolving door" on managers' offices. Interviewees suggested that it's time to try leaving people in place (and promoting them in place) so they can develop the ties necessary to long-term effective outreach efforts. There is a perception that Forest public involvement activities have rewarded the "squeaky wheel," with local residents often left out of the public-involvement equation. There is a need to develop consensus on what can and will be accomplished through public involvement, so that people share expectations and success is easier to achieve.

Issues/questions

- We need to maintain access to national forest lands to ensure equity in recreational opportunities. "We can't all afford our own lake property."
- What will be done about ATV use? "We don't want open access like on the Chequamegon."
- How will the quality and condition of campgrounds and other facilities be maintained in light of declining national forest budgets?
- How will the Wisconsin national forests meet the needs of a changing camper/recreationist—older, wealthier tourists with large motor homes or campers requiring electricity and sanitation dumping stations rather than tents?
- How will the national forests manage for wildlife if they can no longer use clearcuts on larger blocks of land? We need a better understanding of the links between national forest harvesting decisions and wildlife populations.
- What role will township- and/or county-level zoning play in shaping future development?
- How do we balance increased demand for all recreational activities when so many activities appear to be incompatible (jet skis and ATV's vs. the "silent sports")?
- How can local people become more involved in forest management decisions? How can local people be heard?

Community—Florence (PJJ, Confidence = 6)

Description—The growth and prosperity of the Florence Community is tied to Iron Mountain, Michigan, with many residents working north of the border. Community members value the

low population density in the area, but are aware that there are tradeoffs between solitude/isolation and economic diversity/community economic health. The locals pride themselves on their independence. This "go it alone" mentality has cost the community opportunities for grants and other outside funding, but this attitude may be changing. New community residents have brought with them a broader array of values. The Florence Community differs from its neighbor to the west, the Long Lake Community, in that there is more private land and therefore more opportunity for in-migration (fig. 22). These new residents bring with them different values and issues. The population in the Florence Community is generally more diverse and more affluent than that in the Long Lake Community. This affluence is illustrated in Figure 23, which shows that the Florence Community has one of the highest per capita incomes of any community in northern Wisconsin. The diversity in Florence's population means that people can be found on all sides of an issue, but there does not appear to be much polarization within the community on *resource* issues.

Links to forests and public lands—We were told by community residents that the area is the "Silent Sport Capital" of northern Wisconsin. Canoeing, fishing, and hunting are very popular recreational activities, but residents are as likely to take part in these activities on private land as on public lands. There have been large forest industry holdings in the area, and residents have a tradition of using these lands for recreation. Community members are very proud of their "wild rivers," and mentioned in particular the Brule, Pine, and Popple Rivers. Key informants told us that although the area does get some tourist business, they are not

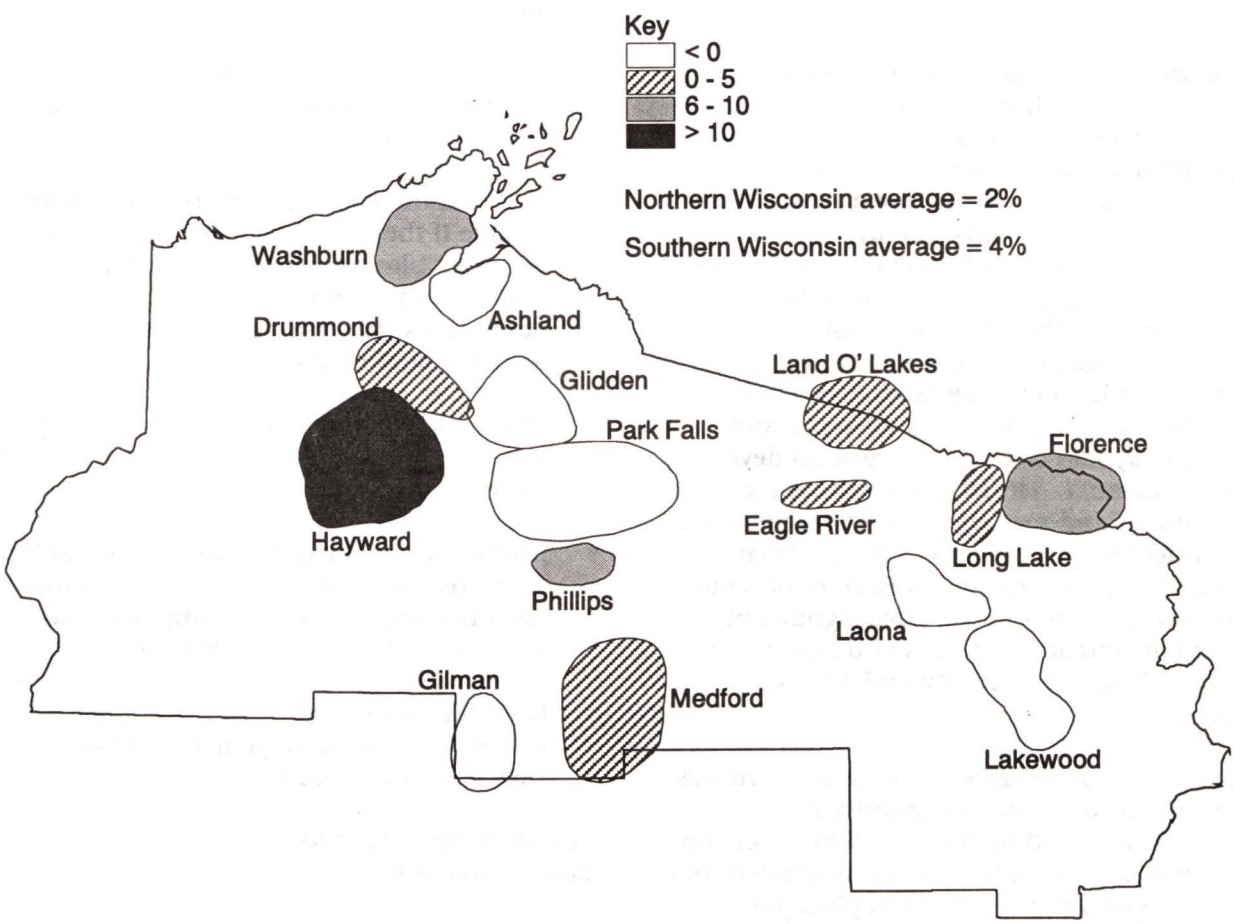


Figure 22.—*Percent change in population, communities of the Chequamegon-Nicolet National Forests, 1980-1989 (U.S. Bureau of the Census 1982 [n.d.]a).*

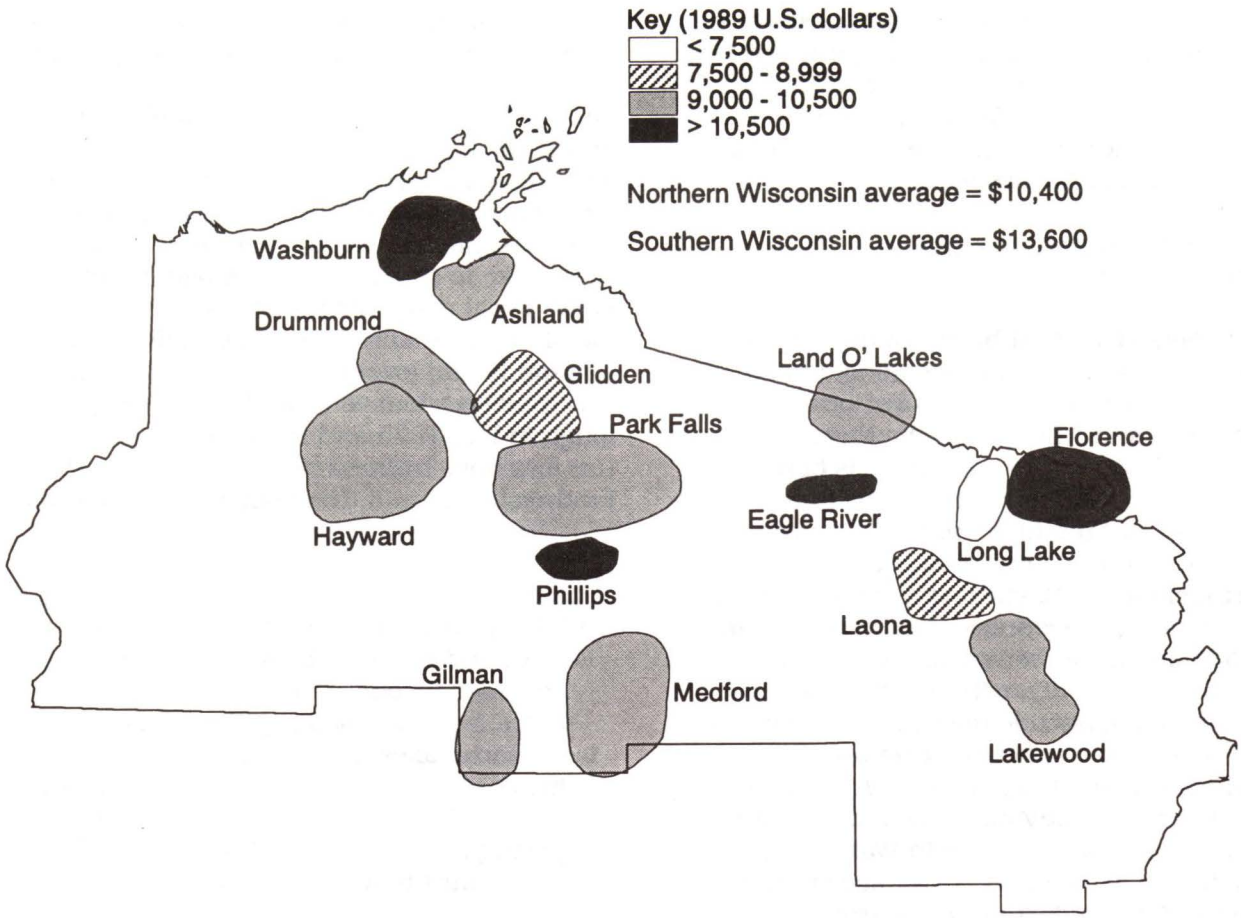


Figure 23.—*Real per capita income, communities of the Chequamegon-Nicolet National Forests, 1989 (U.S. Bureau of the Census [n.d.]a).*

the "flashy tourists you see around Minoqua." The lakes in the area are small and shallow, so they do not draw as many boaters and swimmers as the larger lakes further west. As throughout northern Wisconsin, snowmobiles are very popular in the area, and are one of the few exceptions to the "Silent Sport" label. Residents have and use ATV's, but they accept the limits that the Nicolet has placed on ATV use. Community residents generally recognize the need for timber harvesting, and are accustomed to seeing logging on the large industry holdings in the area.

Ties to the national forest—The town of Florence is the home of the Florence Natural Resource Center—headquarters of the Florence Ranger District (Nicolet National Forest) and other Federal and State natural resource agencies. However, the people in the Florence Community do not seem to have strong ties to the Chequamegon-Nicolet National Forests. Residents do use the Whisker Lake Wilderness Area and other areas of the Forests occasionally, but they also have access to private lands for recreation.

Issues/questions—

- Our property taxes are too high, but we do not support the idea of selling the public lands to generate tax income. How can counties and local communities share in income generated by the national forests?

- People are concerned about possible mineral development in the area and its impact on the quality of life. What will be the role of the national forests in decisions about mineral development?

- What will be the impacts of possible land development along the Brule River on access and quality of the river experience?

- Access to national forest lands needs to be maintained, but residents also support road closures to protect the health and productivity of the land when they are given fair warning and the reasons have been adequately explained.

Community—Washburn (PJJ, Confidence = 5)

Description—The Washburn Community is blessed with a range of recreational opportunities—from boating on Lake Superior to horseback riding and ATV use on the Moquah Barrens. Just as the community is bordered by the topographical features of Lake Superior to the east and the highlands to the west, it is bordered by the highly developed tourist/resort facilities of Bayfield to the north and the more urban and economically diverse community of Ashland to the south. Washburn is a bedroom community, with many of its residents traveling outside the county to work. It is primarily a pass-through community, and travelers seldom stop here on their way to Bayfield and/or the Apostle Islands. However, travelers who have stopped in Washburn immediately perceive its advantages to the more touristy Bayfield or more urban Ashland. In many ways the Washburn Community is ideally situated to enjoy the best of several worlds, if it can maintain its own character and the characteristics that residents value as part of their high quality of life. This high quality of life is defined by access to beautiful and varied natural areas, diverse recreational opportunities, and relatively low population density.

Links to forests and public lands—The Washburn Community has strong ties to the forests and public lands, particularly for recreational opportunities. Although Lake Superior is the primary magnet for drawing people to the area, inland lakes, trails, and camping are highly valued by community residents.

Ties to the national forests—Although a small group of local loggers still depend on the national forest for access to timber, the Chequamegon is viewed primarily as a source of recreational opportunities. The national forest is seen as an important source of ATV trails, especially as other landowners move to block ATV use on or near their land. Horseback riders are also a small, but vocal group of national forest trail users. Nearly all the people we interviewed mentioned berry picking as a highly valued activity on national forest land. Although many residents understand and support the need for some national forest activities that can have a major impact on the land (particularly ATV's and logging), newer residents, such as artists and professionals, would like to see much less impact on the land. Local residents have viewed national forest managers favorably (especially in comparison to employees of the National Park Service who "steal your land"), but the furlough in late 1995 and the initiation of day-use fees have harmed relations between the local residents and Chequamegon employees.

Issues/questions—

- Like all U.S. citizens, Washburn Community residents pay for national forest activities through their Federal income taxes, but they also pay through higher property taxes (to make up for the loss of income from having so much non-taxable land in the county). They greatly resent paying for the use of national forest facilities a third time through day-use fees.

- How can national forest managers juggle the competing demands of different trail users, particularly the snowmobilers, ATV drivers, and horseback riders?

- How can we control growth and development in the community so we maintain the things we value as contributing to our high quality of life ("we want tourists, not terrorists")?

- How can we meet the demand for more and more diverse services without burdening the local residents with high taxes.

- How can national forest managers do a better job of involving the public in national forest management and of educating the public (young and old) about national forest activities?

VALUE AND USE OF SOCIAL ASSESSMENTS

Understanding local social communities is becoming increasingly important in Forest Service planning. Like the concept of an ecosystem, however, social communities range in size and scope from one's personal sphere of

influence to the New World Order. This report presents a practical approach to social assessment that is relevant for forest planning, but it may also be useful at other levels of analysis ranging from the watershed or project scale to ecosystem management assessments at the eco-regional scale.

County Census Data

Information from the U.S. Census and community profiles can be used by national forest managers in several ways. Data from the U.S. Census can help managers understand the broad social and public land agency context in which their lands exist, and allow comparisons with ecological (e.g., gap analysis) and resource use (e.g., location of mills) data at an eco-regional scale. Census data are collected consistently across the U.S., so that the same information can be produced for each national forest, township, county, or State. Over time, this consistency can lead to a better understanding of the broad regional context of forest planning and provide baseline information against which future conditions can be compared. These are critical elements of adaptive ecosystem management.

While understanding the regional context is important, a smaller scale of social analysis is also needed for forest- and project-level planning. Identifying local social communities is a critical subregional level of analysis for understanding social issues and predicting the implications of management decisions at the forest and project level. These activities are required by planning legislation, but are rarely accomplished during the first round of forest planning (Blahna and Yonts-Shepard 1989).

Census data can help *describe* relevant communities, but they cannot *define* them. There are literally hundreds of definitions of communities in the social science literature; some are based on shared interests, social infrastructure, geographic locality, political boundaries, economic regions, or specific functional behavior. The selection of an appropriate unit of community analysis depends on the size and scope of the problem and the purpose of the analysis. The approach taken on the Chequamegon-Nicolet was based on a functional definition of social community. We assumed that communities can be defined based on different behavior and attitudinal orientations to natural resources and public land use in general, and that the only way to identify these communities is based on the perceptions of community members themselves.

Community Data

The qualitative information collected in key informant interviews and used here to develop community profiles is not only an important assessment tool, but it also helps meet public involvement goals. Information from interviews can add texture and depth to the discussion of programs and issues that occur during "Friends of the Forest" meetings and other outreach efforts. Information from key informant interviews helps round out the list of issues managers develop as part of the forest planning process. Insights gained from key informant interviews help land managers anticipate the responses by different publics to changes in forest management. Finally, key informant interviews are two-way streets, with opportunities not only for the interviewer to listen and learn, but also for the interviewer and residents to hold an honest dialogue about common issues of concern.

Many of the issues and concerns noted in the community profiles are multi-dimensional. To adequately address an issue, forest planners need to work with stakeholders to identify and understand the different social facets of an issue and the relationship of the issues to local communities. These different social facets are illustrated below with an example examining the use of ATV's. Questions about the use of ATV's on national forest land were raised by key informants across the Wisconsin national forests. Obviously, ATV's mean dollars to some communities. Community businesses sell and service ATV's and local resorts or other businesses may cater to the ATV user—decisions affecting the use of ATV's can have *economic* impacts. In several functional communities (for example Washburn), groups (families, friends, formal user groups) come together on Forest land for the sole purpose of driving ATV's—decisions affecting the use of ATV's can have impacts in the *community* dimension of the social system. The presence of ATV's on national forest lands symbolizes different things to different people. For some, ATV's are smelly, noisy, intrusive machines that destroy the environment. For others, the use of ATV's is a lifestyle and equity issue. ATV's allow a broader and different group of

people to have access to the national forests. To this group, ATV use on national forest land is as legitimate as the use of snowmobiles on trails and motorboats on lakes. For both these groups of people, ATV's symbolize important issues related to forest management and use—decisions affecting the use of ATV's can have impacts in the *cultural* dimension of the social system. Finally, any decision about the use of ATV's on national forest land will not be made in a vacuum. Forest managers will need to consult with different user groups, developing consensus on a plan for ATV use—decisions affecting the use of ATV's will have impacts in the *political* dimension of the social system. The lesson in this discussion is that when you read the community profiles, including the issues and questions at the end of each profile, don't take the words at face value, but read between the lines to understand the different dimensions of each issue.

In the past, resource planners have tended to use secondary data (such as census or recreation use data) and general public involvement (such as scoping meetings and open houses) to loosely describe interest-based orientations to forest resources. The planning issues then become broad, forestwide issues for which it is difficult to evaluate the implications of different alternatives. For example, do local residents want more, less, or different types of ATV use? The answer, of course, depends on the community, and even subgroups within communities: there is no single ATV issue as described in many planning documents.

More recently, analysts have begun to do more detailed analysis of geographic communities based on timber management issues (e.g., FEMAT 1993). This allows decisionmakers to effectively evaluate the social implications of decisions, but only a narrow range of forest-related interests. The approach used for the Chequamegon-Nicolet National Forests is one way to identify all local impacted communities as a social unit of analysis, identify the unique interest or orientations of different communities, and conduct an issue analysis to evaluate the likely social outcomes of different planning alternatives.

FUTURE RESEARCH AND APPLICATIONS

The process used in this social assessment could be improved in several ways. First, more time should be spent in identifying key informants. A district ranger or other local land manager can provided a good initial list of potential key informants; however, as we interviewed residents we realized that there were others, unknown or forgotten by the district ranger, who would have provided input valuable in the development of community profiles. A snowball sampling technique, in which the residents on the district ranger's list are asked to nominate people as potential key informants, would help generate a more complete list of people who are knowledgeable about the local issues and concerns related to national forest management and use. It would allow us to identify key informants based on more than one individual's opinion—people mentioned by several of their neighbors are potential key informants with broader standing than someone mentioned by only one other person. By using a snowball sampling technique, analysts increase their probability that they will work from a balanced list of potential key informants—individuals that represent a broader range of interests than might be identified by the district ranger. During several interviews, key informants would ask who else we were interviewing, and upon hearing the list, would offer additional names who would bring their viewpoint to our attention. By identifying community residents who are recognized by their neighbors as knowledgeable about resource management, the expanded list of key informants could also be used by forest managers to identify community residents who should be involved in other forest planning and decisionmaking activities. More practically, the longer list of names would provide more interview candidates, increasing the possibility of our being able to interview a sufficient number of key informants within the timeframe allocated.

National forest permits are a potential source of valuable information on users of the forest's resources. Forests currently require permits for cutting of Christmas trees and firewood (for personal and commercial use), post and pole cutting, collection of special forest products, grazing, mining, and many other uses. If within a forest the permit data collected for any one use were standardized and entered into a data base, it could provide an important source of data on changes in resource use and resource users (Sullivan 1997). On camping fee envelopes, for example, if campers provided their home zip codes, number in their party,

length of stay, type of camper, and equipment (fishing boat, skiing boat, jet ski, ATV, snowmobile, etc.), forest managers could begin to monitor important variables that could be useful in designing recreational facilities and marketing. This information could then be entered weekly by concessionaires (using laptop or other portable computers) or other site managers. For other permits, the data could be entered at the same time the permit is obtained. These data could then be compared across districts and through time, perhaps as part of the strategy for monitoring forest plan implementation. For cross-forest comparisons, a standard set of information (like type and size of permit, home town and zip code of permittee, and location of activity on the forest) should be adopted nationally, or at least regionwide (Sullivan 1997).

Social assessments should be done before forest plan revision begins. The Chequamegon-Nicolet assessment took place after the notice of intent to begin planning (NOI) was filed—a document required by NEPA that identifies issues to be addressed in plan revision. Although an author was told that the social assessment did change the way in which at least one of the issues identified in the NOI was interpreted and expanded, the assessment's impact would have been greater if it had taken place earlier in the planning process.

Finally, there needs to be followup to assess the assessment—to determine what parts of the social assessment are most useful and how assessments are used. Improvements in assessment techniques and changes in available data will occur only when we have a better understanding of how managers use assessments and where managers have a better idea what might be possible in a social assessment.

LITERATURE CITED

Bitterroot Social Research Institute. 1994. **Executive summary of the Bitterroot Valley, Montana social assessment with special emphasis on national forest management**. Missoula, MT: Bitterroot Social Research Institute. 18 p.

Blahna, D.J.; Yonts-Shepard, S. 1989. **Public involvement in resource planning: toward bridging the gap between policy and implementation**. Society and Natural Resources. 2: 209-227.

Doak, S.C.; Kusel, J. 1996. **Well-being in forest dependent communities**. Part II: A social assessment focus. In: Sierra Nevada ecosystem project: final report to Congress, vol. II, Assessments and scientific basis for management options. David, CA: University of California, Centers for Water and Wildland Resources. Chapter 13.

FEMAT (Forest Ecosystem Management Assessment Team). 1993. **Forest ecosystem management: an ecological, economic, and social assessment**. Washington, DC: U.S. Department of Agriculture; U.S. Department of Commerce; U.S. Department of the Interior, Environmental Protection Agency. Chapters 1-9 plus appendices.

Flynn, J. 1985. **A group ecology method for social impact assessment**. Social Impact Assessment. 99-100: 12-24.

Haverkampf, K.; Gibson, D.; Tomchek, P.J. 1996. **The Wisconsin Rural Performance Indicator: an assessment of the conditions and needs of rural Wisconsin**. Madison, WI: Wisconsin Rural Partners, Inc. 75 p.

Impact Assessment, Incorporated. 1995. **Social assessment for the Kootenai National Forest**. Libby, MT: U.S. Department of Agriculture, Forest Service, Kootenai National Forest. 320 p.

Jakes, P.J. 1996. **Evaluating the social and economic impacts of riparian management practices**. In: At the water's edge: the science of riparian forestry conference proceedings; 1995 June 19-20; Duluth, MN. Ext. Bull. BU-6637-S. St. Paul, MN: University of Minnesota Extension: 129-133.

Jakes, P.; Harms, J. 1995. **Report on the socioeconomic roundtable convened by the Chequamegon and Nicolet National Forests**. Gen. Tech. Rep. NC-177. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 62 p.

Kusel, J. 1996. **Well-being in forest dependent communities**. Part I: A new approach. In: Sierra Nevada ecosystem project: final report to Congress, vol. II, Assessments and scientific basis for management options.

Davis, CA: University of California, Centers for Water and Wildland Resources. Chapter 12.

Leatherman, J.; Yin-Su, W.; Shaffer, R. 1993. **A generation of change in Wisconsin's economic landscape**. Staff Pap. 93.2. Madison, WI: Center for Community Economic Development, Department of Agricultural Economics, University of Wisconsin-Madison/Extension. 33 p.

Machlis, G.E.; Force, J.E. 1988. **Community stability and timber-dependent communities**. Rural Sociology. 53: 200-234.

Patton, M.W. 1980. **Qualitative evaluation methods**. Beverly Hills, CA: Sage Publications. 379 p.

Quigley, T.M.; Haynes, R.W.; Graham, R.T. 1996. **Integrated scientific assessment for ecosystem management in the interior Columbia Basin and portions of the Klamath and Great Basins**. Gen. Tech. Rep. PNW-382. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 303 p.

Smith, W. Brad. 1986. **Wisconsin's fourth forest inventory: area**. Resour. Bull. NC-97. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 48 p.

Southern Appalachian Man and the Biosphere Cooperative. 1996. **Social/cultural/economic technical report. Rep. #4. The Southern Appalachian assessment**. U.S. Department of Agriculture Misc. Rep. 220 p.

Stewart, S.I.; Jakes, P.J.; Monson, P. 1998. **Emergent issues in forest plan revision: a dialogue**. In: Proceedings of the 1997 Northeastern recreation research symposium; 1998 April 6-8; Bolton Landing, NY. In press.

Stynes, D. 1997. **Recreation activity and tourism spending in the Lake States**. In: Vasievich, J.M.; Webster, H.H., eds. Lake States Regional Forest Resources Assessment: technical papers. Gen. Tech. Rep. NC-189. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station: 139-164.

Sullivan, Mark. 1997. **Monitoring forest resource dependancy in southern Utah: applications to ecosystem management**. Logan, UT: Utah State University, Department of Forest Resources. 181 p. Unpublished Masters thesis.

U.S. Bureau of the Census. [n.d.]a. **Census of population and housing, summary tape file 3A**. <http://venus.census.gov/cdrom/lookup>.

U.S. Bureau of the Census. [n.d.]b. **Index of/population/censusdata/places**. <http://www.census.gov/population/censusdata/places>.

U.S. Bureau of the Census. 1982. **1980 census of population: general population characteristics**. Part 51, Wisconsin. U.S. Department of Commerce, Bureau of the Census PC80-1-B51. Washington, DC: U.S. Bureau of the Census: 51-283—51-288.

U.S. Bureau of the Census. 1992. **1990 housing highlights: financial facts**. Economics and Statistics Administration, Bureau of the Census CH-S-2. Washington, DC: U.S. Department of Commerce. 4 p.

U.S. Bureau of the Census. 1997. **Density using land area for States, counties, metropolitan areas, and places**. Table 1. Land Area, Population and Density for States and Counties: 1990. <http://www.census.gov/population/www/censusdata/density. html>.

U.S. Department of Agriculture, Forest Service. 1990. **Critique of land management planning**. Vol. 2: National Forest planning: searching for a common vision. FS-453. Washington, DC: U.S. Department of Agriculture, Forest Service, Policy Analysis Staff. 91 p.

U.S. Department of Agriculture, Forest Service. 1995. **Social impact analysis: principles and procedures: student manual**. USDA-Forest Service Course 1900-03. Washington, DC: U.S. Department of Agriculture, Forest Service, Ecosystem Management. Chapters 1-10 plus appendices A-H.

APPENDIX A—

QUESTIONNAIRE USED TO INTERVIEW KEY RESPONDENTS

The following interview questions were used with key informants in the identification and analysis of functional communities:

1. First, I want to ask you some questions about your **Background**:

   Date:
   Time:
   Place:
   Informant(s) name(s):
   Town:
   Occupation(s):
   Residence (years):

2. **Community** (No specific mention of natural resources yet)

   Now, I would like to get your feelings on what you consider to be your primary "community" area, in both geographic and social terms. Communities are more than just areas with political boundaries (e.g., county, city, etc.). Communities are defined by such things as:
   - places that are similar based on values and/or social ties
   - places where people meet their daily needs (e.g., auto repair, medical help, shopping, entertainment, etc.).

   a. What is it that makes this place/area a "community"?
   b. Why is it different from other surrounding areas?
   c. What's special about it? Why do people stay here? Why do people move here?

3. **Newcomers**

   a. Who or what type of people are moving into the area?
   b. Has this changed the character of the community? If so, how?

4. **Forest-Community Linkages**

   a. Do the public lands and natural resources of the region play a role in the character of the community? If so, how? Which areas or resources in particular?
   (ALTERNATIVE WORDING: Are there particular places or types of resources in the national parks or forests in the region that are especially important to the people living in the community? What and where are they? Why are they important?)
   b. To what extent is this community "dependent" upon public land resources and their management? How are they dependent? What specific resources are involved? Where are they located?

5. **Issues**

   a. What are the most important issues facing this community at present? (FOR EACH) Is this issue related to natural resource conditions and resource management practices? If so, how? (PROBE FOR OTHERS)
   b. What will be the most important issues facing this community over the next 10 years? (FOR EACH) Is this issue related to natural resource conditions and resource management practices? If so, how? (PROBE FOR OTHERS)

6. **Management Shifts**

   How is the community's future linked to possible shifts in resource management priorities and directions? Is the community "vulnerable" if certain changes are made in the way resources are managed? If so, how?

7. **Issue Details**

   a. What are major areas of disagreement/conflict among different groups *within* the community about resource use and management, development trends, etc.? Who are the different groups and or interests involved and what are their concerns?

b. What are the major areas of disagreement/conflict between *local* and *non-local* groups or interests about resource use and management, development trends, etc.? What groups/interests are involved and what are their concerns?

8. **Trust**

a. How do local people view Federal land managers?

b. How much conflict? trust/distrust? cooperation? is there?

9. **Specific Issue**

Probe situation involved with specific issues from QUESTION 5 on previous page that are most directly related to the Chequamegon and/or Nicolet National Forests. Ask details about specific groups, their uses and interests in resources, and the role-benefits-attachment-importance of resources for the groups involved.

APPENDIX B—

LOCATING CENSUS DATA ON THE INTERNET

A wealth of social information is available from the Bureau of the Census on the Internet. One of the easiest ways to access the information is through "1990 Census Lookup" at <http://venus.census.gov/cdrom/lookup> (Bureau of the Census [n.d.]a). The steps used to find county-level data are described below. Census Lookup has not only State and county data, but also data at the township and metropolitan statistical area levels. The best way to learn how to use this source of social data is to get online and try some commands.

Step 1—Select your database

When you visit the 1990 Census Lookup location on the Internet, you'll come to a page that looks like the one shown in table 3. To obtain our State, county, and county subdivision (township, village, and city) data, we selected "STF3A" from the databases shown under the section "STF3 technical documentation."

Step 2—Select State(s) of interest

Table 4 shows the first screen in STF3A. On this screen you can select one of more states for analysis. For this report, we selected Wisconsin and the option "Go to level State—County."

Step 3—Select counties of interest

In table 5 is a copy of the screen that allows us to select the county(s) of interest. Again, for the counties selected (for example, 22 counties for northern Wisconsin), the relevant option is "Select/retrieve **all** of the areas below."

After selecting your counties of interest, you'll be asked if you want to go ahead and select your tables or if you want to review what you've selected thus far (table 6). Once you're comfortable you've selected what you really want, proceed to Step 4.

Step 4—Select tables of interest

You can select from 292 tables in Census Lookup (table 7). About one-third of these tables contain information about people, the remainder about households. In general there are summary tables, the tables that break down the summary table. For example, Census Table P13 shows number of people by age, Census Table P14A shows the number of white males by age, Table Census P14B shows the number of white females by age, Table Census 14C shows the number of black males by age, and so on. You can select any number of tables from the list. The tables you select will be prepared for each county you selected in Step 3. Once you're sure you have the all the tables you want you submit your request. Census Lookup will come back with a prompt asking you in what format you'd like your tables. In this example, we selected "HTML."

Once you've submitted your format, it takes just a few seconds to generate your tables. Table 8 shows part of a run we submitted for purposes of illustration. After receiving your run, you can go back and change any of the parameters selected above to produce more or different tables.

Table 3.—*First screen seen when you access 1990 Census Lookup—screen where you choose your database*

1990 Census Lookup

[The LOOKUP homepage | Technical Docs | Known Bugs | Feedback / Questions]

This is the 1990 Census Data Lookup server. For general Census Data questions, please contact gatekeeper@census.gov. If you have problems or questions regarding this WWW data server, first consult known bugs (especially temporary system problems) to see whether your problem is described there. If it is not, please use our convenient feedback/questions form.
If this server appears to be overloaded, please try one of our other Lookup servers.

Choose a database to browse:

1990 Census Summary Tape File 3 (STF3)
Sample count - all socioeconomic and demographic variables

STF3 technical documentation

STF3A
Detailed geography - county, place, tract, etc.

STF3B
ZIP codes.

STF3C - part 1
Nation and state totals, Metropolitan Statistical Areas (MSAs).

STF3C - part 2
Urbanized Areas (UAs). ***Under construction.***

1990 Census Summary Tape File 1 (STF1)
100% count - basic demographic variables

STF1A
Detailed geography - county, place, tract, etc.

STF1C
Nation and state totals. Not all tables are available.

Other Related Applications:

US Gazetteer
Place, County Search Engine and Front-end tool for retrieving 1990 Census data and Tiger Maps.

Deane Merrill dwmerrill@lbl.gov
Chris Stuber cstuber@census.gov

Table 4.—*The screen that appears if you select "STF3A" as your database to browse in 1990 Census Lookup*

(URL reload)

Current Level: State

Choose an option:

- ◉ Retrieve the areas you've selected below.
- ○ Select/retrieve **all** of the areas below. (may be slow)
- ○ View map of the area.
- ○ Go to level `State--County`
- ○ Go to level `State--Place`
- ○ Go to level `State--Urbanized Area`
- ○ Go to level `State--Metropolitan Statistical Area`

Choose an option, select data, then press submit: [Submit] [Reset]

United States:

```
Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Columbia
Florida
Georgia
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
```

Table 5.—*An example of the screen that appears if you select county as the level of data to access in 1990 Census Lookup (counties will vary by the State selected)*

(URL reload)

Current Level: State--County

Choose an option:

- ◉ Retrieve the areas you've selected below.
- ○ Select/retrieve **all** of the areas below. (may be slow)
- ○ View map of the area.
- ○ Go to level State--County--Census Tract
- ○ Go to level State--County--Metropolitan Statistical Area
- ○ Go to level State--County--County Subdivision

Choose an option, select data, then press submit: [Submit] [Reset]

Wisconsin:

Adams County
Ashland County
Barron County
Bayfield County
Brown County
Buffalo County
Burnett County
Calumet County
Chippewa County
Clark County
Columbia County
Crawford County
Dane County
Dodge County
Door County
Douglas County
Dunn County
Eau Claire County
Florence County
Fond du Lac County

Table 6.—*The screen that allows you to choose your tables and edit your selections when accessing 1990 Census Lookup*

(no URL reload available)

Current Level: State--County

Choose a data retrieval option:

- ◉ Choose TABLES to retrieve (population, race breakdowns, etc.)
- ○ EDIT your selections so far.

Choose an option, press submit: [Submit] [Reset]

Table 7.—*The first page of the screen that appears when you select tables to access in 1990 Census Lookup*

(no URL reload available)

Select the tables you wish to retrieve:

Press Submit when done: [Submit] [Reset]

LIST OF TABLES (MATRICES)

Table (matrix)	Title	Total number of data cells
☐ P1.	PERSONS(1) Universe: Persons	1
☐ P2.	UNWEIGHTED SAMPLE COUNT OF PERSONS(1) Universe: Persons	1
☐ P3.	100-PERCENT COUNT OF PERSONS(1) Universe: Persons	1
☐ P3A.	PERCENT OF PERSONS IN SAMPLE(1) Universe: Persons	1
☐ P4.	FAMILIES(1) Universe: Families	1
☐ P5.	HOUSEHOLDS(1) Universe: Households	1
☐ P6.	URBAN AND RURAL(4) Universe: Persons	4
☐ P7.	SEX(2) Universe: Persons	2
☐ P8.	RACE(5) Universe: Persons	5
☐ P9.	RACE(25) Universe: Persons	25
☐ P10.	PERSONS OF HISPANIC ORIGIN(1) Universe: Persons of Hispanic origin	1
☐ P11.	HISPANIC ORIGIN(16) Universe: Persons	16
☐ P12.	HISPANIC ORIGIN(2) BY RACE(5) Universe: Persons	10
☐ P13.	AGE(31) Universe: Persons	31
☐ P14A.	RACE(1) BY SEX(1) BY AGE(31) Universe: White males	31
☐ P14B.	RACE(1) BY SEX(1) BY AGE(31) Universe: White Females	31
☐ P14C.	RACE(1) BY SEX(1) BY AGE(31) Universe: Black males	31
☐ P14D.	RACE(1) BY SEX(1) BY AGE(31) Universe: Black females	31
☐ P14E.	RACE(1) BY SEX(1) BY AGE(31) Universe: American Indian, Eskimo, or Aleut males	31
☐ P14F.	RACE(1) BY SEX(1) BY AGE(31) Universe: American Indian, Eskimo, or Aleut females	31
☐ P14G.	RACE(1) BY SEX(1) BY AGE(31) Universe: Asian and Pacific Islander males	31
☐ P14H.	RACE(1) BY SEX(1) BY AGE(31) Universe: Asian and Pacific Islander females	31
☐ P14I.	RACE(1) BY SEX(1) BY AGE(31) Universe: Other race males	31
☐ P14J.	RACE(1) BY SEX(1) BY AGE(31) Universe: Other race females	31
☐ P15A.	SEX(1) BY AGE(31) Universe: Males of Hispanic origin	31
☐ P15B.	SEX(1) BY AGE(31) Universe: Females of Hispanic origin	31
☐ P16.	PERSONS IN HOUSEHOLD(7) Universe: Households	7
☐ P17.	HOUSEHOLD TYPE AND RELATIONSHIP(15) Universe: Persons	15
☐ P18.	HOUSEHOLD TYPE AND RELATIONSHIP(12) Universe: Persons 65 years and over	12
☐ P19.	HOUSEHOLD TYPE AND PRESENCE AND AGE OF CHILDREN(7) Universe: Households	7

Table 8.—*An example of the output received from 1990 Census Lookup (Table P13 is shown)*

```
(no URL reload available)
```

1990 US Census Data
Database: **C90STF3A**
Summary Level: `State--County`

Adams County: `FIPS.STATE=55, FIPS.COUNTY90=001`

AGE
Universe: Persons

Under 1 year	117
1 and 2 years	378
3 and 4 years	363
5 years	206
6 years	197
7 to 9 years	593
10 and 11 years	372
12 and 13 years	324
14 years	214
15 years	182
16 years	178
17 years	195
18 years	165
19 years	131
20 years	117
21 years	129
22 to 24 years	443
25 to 29 years	1058
30 to 34 years	1319
35 to 39 years	1107
40 to 44 years	952
45 to 49 years	923
50 to 54 years	918
55 to 59 years	861
60 and 61 years	466
62 to 64 years	742
65 to 69 years	1072
70 to 74 years	868
75 to 79 years	581
80 to 84 years	277
85 years and over	234

Ashland County: `FIPS.STATE=55, FIPS.COUNTY90=003`

AGE
Universe: Persons

Under 1 year	238
1 and 2 years	409
3 and 4 years	534
5 years	230
6 years	242
7 to 9 years	842
10 and 11 years	528
12 and 13 years	505
14 years	218
15 years	237
16 years	222
17 years	232
18 years	254
19 years	256
20 years	236
21 years	287
22 to 24 years	575
25 to 29 years	1180
30 to 34 years	1246
35 to 39 years	1181
40 to 44 years	931
45 to 49 years	769
50 to 54 years	705
55 to 59 years	603
60 and 61 years	270
62 to 64 years	468
65 to 69 years	710

☆U.S. GOVERNMENT PRINTING OFFICE: 1998 - 756-016/80025

Jakes, Pamela; Fish, Thomas; Carr, Deborah; Blahna, Dale.
1998. **Practical social assessments for national forest planning.** Gen. Tech. Rep. NC-198. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 44 p.

Residents of northern Wisconsin identified functional communities—geographic areas in which people share perceptions of and relationships to forests and natural resources. Functional communities are a useful concept for displaying social information for forest management and planning.

KEY WORDS: Community analysis, social assessment, functional groups.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410, or call 202-720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

Printed on recyclable paper.

Our job at the North Central Forest Experiment Station is discovering and creating new knowledge and technology in the field of natural resources and conveying this information to the people who can use it. As a new generation of forests emerges in our region, managers are confronted with two unique challenges: (1) Dealing with the great diversity in composition, quality, and ownership of the forests, and (2) Reconciling the conflicting demands of the people who use them. Helping the forest manager meet these challenges while protecting the environment is what research at North Central is all about.